The Builder.

VOL. XV.—No. 732.

KENSINGTON GORE, as a site for the National Gallery, is not popular. Situated at the western extremity of the metropolis, it is felt that to locate the national collection there, would be to withdraw its beneficial influences, and its ever-fresh delights, from a very large proportion of the population, particularly as respects the working classes. The desire of His Royal Highness Prince Albert to concentrate all that relates to art and science in one Institution is, in the abstract, admirable; and while we dissent from those who would adopt Kensington as this centre, we desire not to be considered as joining any common cry of objection to views entertained by the Prince. If but for the part played by His Royal Highness, in what must still be called *The* Great Exhibition, the kingdom is most deeply indebted to him,—as it is for other acts also. With more information,—shall we say, too, good advisers, in respect of the artistical and literary professions and professors, His Royal Highness might, with ease, become the most popular personage in the country, and, while doing an immense amount of good, create for himself a reputation which posterity would not let die. This, however, is not now our theme.

It appears by the plan of the land at Kensington that it consists of about eighty-eight acres, of which about fifty-two acres lie between the main roads, forming its principal sub-division; upon which are proposed to be erected the National Gallery, the Colleges of Art and Science, and the Museums of Industrial Art and Patented Inventions, in the whole nearly 6,000 squares of building. About ten acres of the site appear to be devoted to roads, and the remainder, about twenty-six acres, to outlying plots of ground of irregular form, proposed for the accommodation of the learned societies, a music-hall, official residences, &c. &c. The wedge-like plot of ground, towards Kensington Gore, which, although in the midst of the site, forms no part of it,—having a frontage of about 320 feet to the high road, and extending about 1,100 feet into the principal sub-division of the ground, is a serious drawback upon any architectural display that might be made towards Hyde-park. The estimated extent of building is calculated roughly from a design in the hands of the Royal Commission for the Great Exhibition, and understood to embody the views of those members of it who desire to see the National Gallery on their land at Kensington. The design is founded on that of the Palace at Caserta, and would cover 1,900 squares. The cost of it has been roughly estimated at a million and a half of money; while the other buildings, including laying out the grounds, would probably cost two millions more.

It has been urged amongst the objections that, large as the site is, it is not sufficiently so for such a concentration of artistic and scientific institutions as has been shadowed out, and which some think should include the National Library and the collection of antiquities at the British Museum. Mr. Bruce Allen's project, to which we referred last week, would meet this objection by adding to the site a portion of Hyde-park and Kensington-gardens opposite to the land already in the hands of the Commissioners, erecting thereon the national galleries of architecture, sculpture, and painting, and connecting the two sites by decorative arched gateways across the Kensington high road. London, however, is not disposed to give up any of its open space here, even were it determined that the National Gallery should be brought to this end of the town.

Our only objection to the scheme rests on the removal of the collection from its present central situation so far to the west of the whole metropolis. It was shown some time ago that by taking in the workhouse and other property at the back of the present National Gallery, a site could be obtained sufficiently large for the purpose; but this would be an expensive affair, and, moreover, would necessitate the destruction of a building which would otherwise serve a useful purpose for many years to come. The assertion that the pictures must necessarily be more damaged by the impurities of the atmosphere in the centre of the town than at Kensington, is not generally entertained. Private collections in London are not found to suffer: the tendency of inventions and opinion is to lessen the amount of smoke allowed to escape into the atmosphere; and good ventilation would prevent the deposition of dust on the pictures, while *glazing* the paintings would set this part of the question altogether at rest.

A scheme has been suggested by Sir Charles Barry, which, while leaving the present building in Trafalgar-square for artistic or educational purposes, would retain the national collection in a central position: and this we would now lay before the public. It consists in the appropriation of the British Museum, with the enlarged title of "*The British Museum of Art and Literature.*"

This Institution occupies a central portion of the metropolis: its site is lofty and commanding, the soil good, and well drained; it is open to the north, and has eighty-two acres of open space in the squares, which adjoin, or are immediately contiguous to it. It contains at present 1,460 squares of building, and stands upon 8½ acres of ground, which, by the addition of the surrounding property, with additional buildings upon it, might be increased to 3,269 squares of building and 13½ acres of ground. It has already cost the country little short of a million of money: it is in a good neighbourhood, well calculated for residences for professors and officers of the Institution, and it has the advantage of the London University as an adjunct in its immediate locality: it is, moreover, a very popular Institution, and only requires the clearing away of a portion of the shabby neighbourhood to the south of it, and the opening up of a new approach to it in that direction, to render it an unexceptionable site for a great National Institution.

It is proposed that this institution should not only be devoted to art and literature, but also to the accommodation of the learned societies. For this purpose it would be necessary to purchase the whole of the surrounding property, extending to Montague-street and Russell-square on the east, to Montague-place on the north, and to Bedford-square and Charlotte-street on the west; and erect additional buildings on the west side of the present buildings.

The quadrangle and the ground story of the building might then be appropriated to the antiquities, the whole of the principal floor to the library, including the manuscripts, prints, and drawings, with the reading-rooms; and the upper floor to the national pictures, which floor, with certain modifications that could be made at moderate cost, might be admirably adapted to receive them, and would not only accommodate the present collection, including the cartoons at Hampton Court, but afford space for a future increase of it to nearly eight times its present amount, or more than double the extent of space allotted to the pictures in the Louvre. To effect these arrangements, it would be necessary to remove by degrees, as other accommodation could be provided, the whole of the natural history collection, which at present occupies a large portion of the one-pair floor, as well as other portions of the building, to Kensington. The cost of the additions and transformations recommended has been calculated at 130,000*l.* which, however, might be spread over a period of two, or even three years; but upon such an arrangement as would allow of depositing the present collection of national pictures in the rooms proposed for their reception, and providing for the pressing wants of the library, at the end of the first year.

The Institution, it is maintained, even in such a limited and incomplete state, would even then exceed the accommodation for galleries of art and books provided by the Parisian Bibliothèque Impériale and Louvre combined.

For the realization of the entire project ultimately, it would be desirable that the Government should immediately purchase the fee-simple of the whole of the property which surrounds and is immediately contiguous to the present building.

The site at Kensington would then remain for a "National College of Science," in its various applications to arts, manufactures, and commerce. For this purpose the distance from the centre of the metropolis would be of less importance, for the feeling of the country at large as regards art is still wofully deficient, and can only be fostered and improved by placing the finest examples of all ages in a central position, as in the haunts, as it were, of the whole metropolis, so that all its inhabitants and all who visit it from the provinces, particularly the industrial and working classes, may have the benefit of being able constantly and easily to inspect them, and thus become familiarised and even imbued with their principles and excellence. With respect to science, the country is already pre-eminent; and the distant locality, therefore, of an institution for its encouragement is not likely to deter that portion of the community who are interested in it, and are anxious to profit by its advantages, from being obliged perchance to go out of their way for the purpose.

The only buildings that would be required, according to this suggestion, would be museums for the exhibition of zoological, botanical, and mineralogical specimens, and for patented inventions, and menagerie for living specimens in the department of natural history; a library of science and theatres, with laboratories for public lectures in every branch of science; combined with a botanical garden, and accommodation for living specimens of the animated kingdom.

The valuable collections in the Department of Natural History, at present at the British Museum, the entire collection of the Museum of Economic Geology, the Trade Museum of the Society of Arts, the collection of patented inventions under the charge of the Patent Office, and possibly one or both of the private collections of the Regent's-park and Surrey Zoological Gardens, if concentrated upon this site, would form such a valuable, instructive, and interesting collection as would not fail to excite a great interest in the institution amongst all classes of the community.

If fully carried out, it might then vie with the Jardin des Plantes, which it would much exceed in acreage, and the Conservatoire des Arts et Métiers combined, of the French capital, and bear an honourable comparison with these noble institutions.

The present National Gallery contains, it is calculated, 278 squares of building, which could be increased to 448 squares, by removing the present portico and other columns and projections, which now break up its front, and

building upon the wasted forecourt a fresh façade; and it might then be devoted to the teaching of art in all its branches, and the periodical exhibition of modern works and the other purposes of the Royal Academy of Fine Art, who would doubtless be willing to pay, at any rate, part of the outlay incurred.

The objection to Kensington Gore, to which we attach most weight is, as we have already said, the removal of the fine art collections from the centre of the metropolis; the necessity for this step not having been proved. It is most desirable to gather them together in a position within easy reach of the toiling workers in "populous city pent," and it seems to us that sufficient appropriate space to secure a complete and satisfactory arrangement may most readily, and with the least pecuniary outlay, be provided by rendering the building in Great Russell-street

THE BRITISH MUSEUM OF ART AND LITERATURE.

SO-CALLED MEDIÆVAL *v.* SO-CALLED CLASSIC.

IN the controversy which has been going on as to the respective merits of Mediæval and Classic Architecture, there are several points materially affecting the main question, which, although occasionally alluded to, are not kept enough in view in weighing the arguments on either side,—points especially relating to fitness and use, in meeting the many needs of modern national requirement, whatever style may eventually prove to be the best fitted for our use. And unless there is some sort of agreement amongst us as to principles of construction, and true treatment of available materials, it is useless to enter into arguments as to the superiority of any certain school of design.

But, first, as regards the spirit of the two styles. It is impossible to put aside, as though it never existed, the whole of that which has formed the staple of early associations, and which most men have been taught, from childhood upwards, to regard as perfect and beautiful. Moreover, it is impossible not to see a certain amount of beauty and dignity even in the monotonous repetition of the same form, or in a long line of straight or curved cornice, such as is seen in Regent-street or Park-crescent. And every one who has had the opportunity of judging, agrees in giving to Classic architecture its due meed of honour on its own native soil, and under its own native sky. The clear atmosphere of Italy and Greece, the intense and pure light, the genial climate, all combine in bringing out to the utmost perfection the fine flowing lines of the sculpture, the delicate shading of the mouldings, the imposing effect of grand massive outline, and an uncompromising uniformity,—and the very passiveness of the style seems in accordance with, and expressive of, the climate, the country, and the people; just in the same way as the austere and changeable climate of Northern Europe seems suited to display the especial characteristics of the Gothic style; the comparative lack of light requiring deeper hollows and broader and bolder lines, in order to obtain equal richness of effect or depth of shadow, whilst the coldness of the climate and ruggedness of the scenery seem to suggest the suitableness of warm colours and picturesque forms; and the crispness and energy, and the bold severity of the Gothic spirit seem suited in every respect to its own place and purpose.

But now for more practical matters. 1. In our climate and country, with occasionally deep snows, and frequent driving rains, a steep roof is less liable than a low one (*cæteris paribus*), to let in the wet; the tiling, or slating, is less liable to be ruffled, or torn up; the timber is less liable to decay from the retention and constant condensation of moisture. It may be said that a steep roof is in itself more costly than a low one; but, then, again, in order to obtain an equal amount of accommodation, the steep roof is actually the least costly of the two.

2. The freedom of the Gothic style, which allows of windows being placed only where they are wanted, and of being made only of the needful proportion and size, is generally far more accommodating to domestic requirement than the employment, for every purpose of windows, of an oblong shape and uniform position. As regards the use of sashes and casements, it is no question of style at all, but only of construction. Moreover, it is as absurd to say that casements always let in the weather, as it is to urge that sashes always do keep it out. It depends not upon the nature of the thing, but upon the "*make*" in each particular instance.

3. The Gothic style is in no wise dependent upon the size of stones, or even upon the nature of materials at all, for effective treatment; whilst Classic architecture, when truly carried out, does depend very much for its effect upon the largeness of the materials used; the majority of such buildings now being constructed of bricks, or small stones, cemented over to represent larger blocks. And seeing that bricks are abundant, and that small stone is much the most easily procured, wrought, and fixed, and so the least costly, too, the Gothic can claim some little advantage over the Classic in this respect; and unless the Classic makes good speed in modifying some of these inconsistencies, it will be fairly beaten out of the field in a few years. If it does mean to undergo modification, it must do it quickly.

The introducers of the Classic style are said to have derided the works of the monkish architects of our mediæval cathedrals, in that such lofty structures were carried up of stones no bigger than could be carried from scaffold to scaffold, on men's shoulders: surely the deriders unconsciously paid the greatest possible compliment to the science and ingenuity which could carry out such noble works of art with such slender means, instead of being dependent upon mechanical force for the employment of such materials as the introduction of the new style necessitated. Let their successors look to it, that similar inconsistencies do not attach to them.

It is not to be wondered at that the advocates of Classic architecture have neither time nor inclination to enter deeply into the study of the principles of Pointed architecture. No one can reproach them for not throwing either their heart or their mind into its spirit. And it is only by the principles of true art—independently of its being Classic or Gothic, or anything else—being brought out and presented to their notice, that any architects are likely to change their own beaten track. So that the same may be said, perhaps with equal truth, of all those who have been wholly taken up with the study and practice of either style; and, hence, we may grieve, though we cannot wonder, that there is so small agreement between the two parties even upon points connected with construction and practical use—upon the first principles and elements of architecture; and that such vague notions do prevail as to the true nature of many things which hitherto have hardly come within the sphere of each individual architect's pursuit or practice.

Yet surely it is in the settlement of such questions as these, numerous as they are, that we must look for a hopeful issue in the vitality and true growth of art. If the foundations are bad, there can be no permanent building, however fair the superstructure may be. Such questions as these ought to form the subjects of our controversies much more than they do; indeed, the consideration of them comes properly prior to any question of mere style. These cannot all conform to style. Style may arise out of them. The Classic style does as yet fall short in many such particulars: it disregards many of these so-called minor considerations. And it may be urged more justly against the Classic than against the Gothic, even as now carried out, that an architecture which sets aside circumstances of time and place,—which is unable to localise itself,—which is much dependent upon extraneous sources for the very means of its success, or existence,—which is powerless in its attempts to make efficient use of such means as it can command,—lacks so many essentials of true art, and proves itself so feeble in effecting that which a living art has to accomplish, that men may well doubt if it does really possess all the truth and energy which it professes to display,—even supposing it to answer fully the ends of a mere utilitarian existence.

Again: the Gothic spirit is even more pliant than the Classic in making use of modern inventions. Failures in individual instances have occurred, in consequence of the imperfect state of the art, not from any defect in it as a style; but the advocates of the Gothic, so far from being unconscious of occasional imperfection on such accounts, are every day discovering the means of rectifying such evils. Happy the style which has no incongruities, or inconsistencies to lament!—or, it may be rather at the present time, happy those who are not quite blind to their own state of imperfection, whilst they see the road to remedy its evils.

As to the relative capabilities of the two styles, each in its modified state, to answer every purpose of civil and domestic, as well as collegiate and ecclesiastical use, much possibly may be said on either side. I will not venture to call the Classic positively incapable of universal application. I can only confess to not having found out its universal fitness. Whereas the Gothic is, to say the least, as fully capable of general adaptation as the Classic, besides being much more expressive of the purpose for which the particular building is designed, notwithstanding the supposed absurdity of using the same style for all purposes, after the fashion of all former ages.

The Gothic style is pre-eminently comprehensive and Catholic; and although the Mediæval architects did universally use the same style for all purposes,—as always must be the case with high art,—yet their buildings did truly and evidently show, at first sight, what their purpose was, as is still the case with all buildings consistently carried out. There is no mistaking the castle for the cathedral, the parsonage for the parish church, the manor-house for the village school, nor yet a public institution for a private residence, a county court for a college, a gymnasium for a guildhall, where each one tells, as it may and ought to tell, its own proper tale. These are wholly and entirely distinct from each other in their general form and feature when the same style and even similar detail are used in all. It is the outline chiefly which distinguishes their several purposes; but if purpose is disregarded in the design, if a church is built with a grand eastern vestibule, or if a house has a well-defined chancel, nave, and porch, then, indeed, all distinctiveness is utterly lost, and all character is swallowed up in unmeaning forms.

And lastly, as to style itself. I quite concur with "Z" that in order to render the Gothic in all respects suited to the age, it must be much modified, or, as some call it, "developed." Yet not more so than either the modern or the antique Classic. But I cannot see why the reproduction of such a style must be, *primâ facie*, more incongruous than the introduction of a new style from southern Europe in the sixteenth century, or even a continuation of the same style, or some debased phase of it, from that day to our own, unless it is generally acknowledged that art had not degenerated prior to its present revival. Still less can I see how or why a genuine "Protestant" should consider our own Mediæval architecture to be, in its nature, more "Papistical" than that style which has been used by the Church of Rome for all her buildings, from that day to this, unless, indeed, the Papal element has been banished from her pale for the last 300 years.

WILLIAM WHITE.

CIVIL CONSTRUCTION AS REPRESENTED IN THE PARIS UNIVERSAL EXHIBITION.

REPORTS on the late Paris Universal Exhibition continue to be published, and will serve to make it more and more useful. Several of them should have our attention. At the present moment, however, we would refer specially to the last issued,—an able document on "Civil Construction," by Capt. Fowke, R.E.,—and confining ourselves to the section on tiles, will let the Reporter speak for himself.

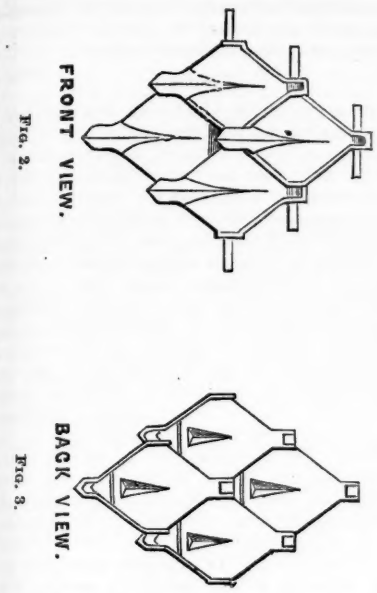
The several descriptions of roofing tiles shown in the Paris Exhibition, almost all of which are from France itself, may be considered as belonging to

Fig. 2.

Fig. 3.

SECTION OF CAST-IRON GLAZED FRAME.

Fig. 4.



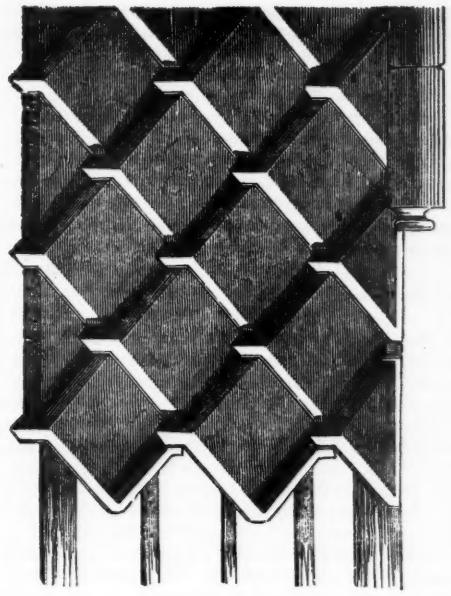


Fig. 1.

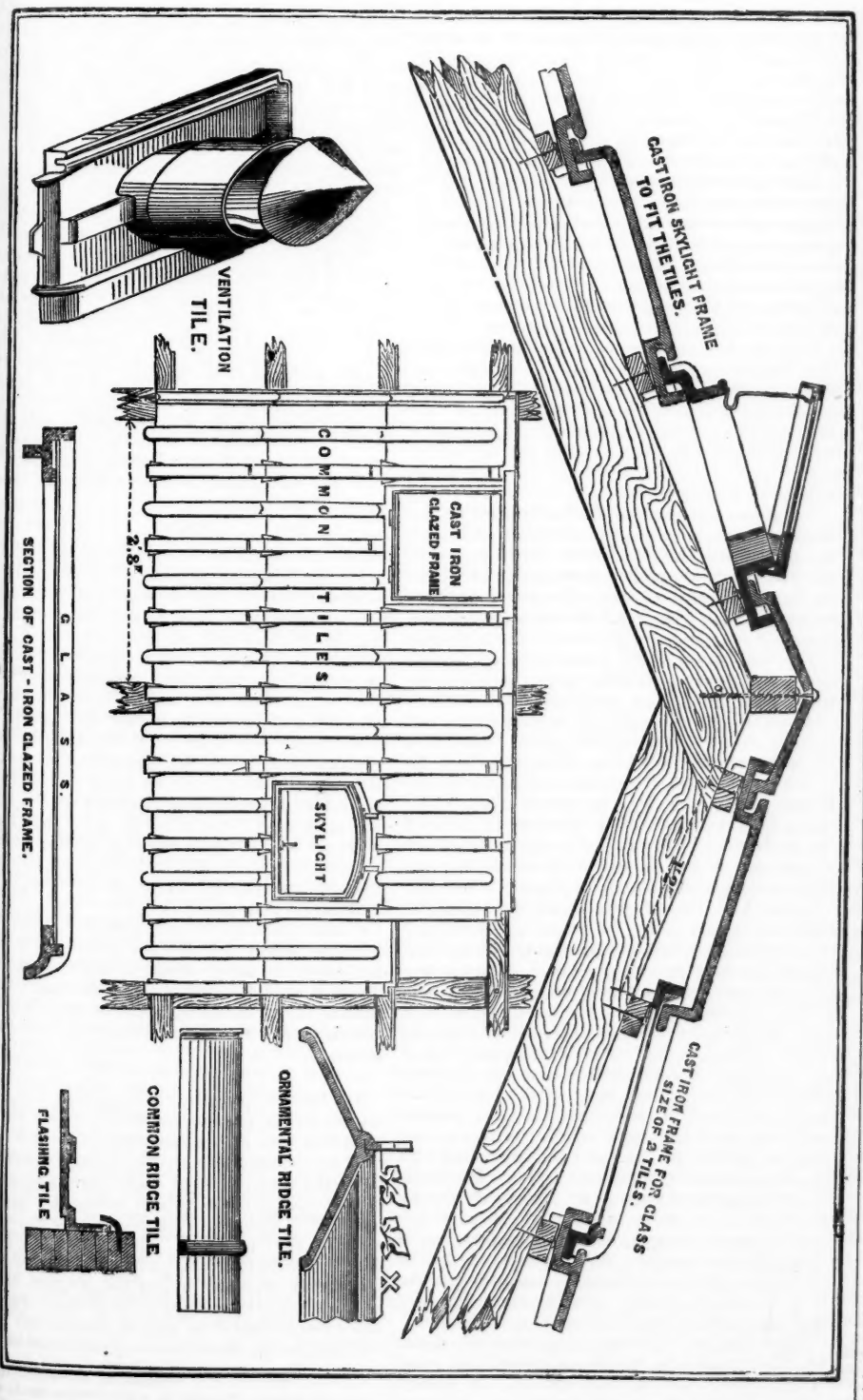


Fig. 4.

one of five different classes, the first of which includes the original flat tile, the examples of which differ merely in the material of which they are composed, and in their greater or less thickness and weight, governed in great measure by such material. The other four classes or general forms of tile are the results of different attempts which have been made from time to time to obviate the great objection to the employment of flat tiles, namely, the necessity of laying them so that the roof is covered at every part of its surface with three thicknesses of tile, and the consequent enormous weight of this description of covering, an evil so great as to have almost entirely banished it from all large modern structures in this country, as more than counterbalancing its undoubted and great advantages of durability, great strength, resistance to the action of the wind, cheapness, and perhaps the most important of all, the fact of its being so bad a conductor of heat as to render the attics of buildings thus covered, less sensible of the extremes of heat and cold, which are so much felt where metal or even slate is employed.

The flat tile is kept in its place by pegs or nails driven through holes in its upper part, and each tile is by this means attached to the lath without being dependent on its neighbours for support. The same rule applies to the next class, which is, as well as the first, flat, and attached in the same way, and in which the attempt to reduce the weight consists merely in cutting away those parts of the tile which are concealed beneath others, and in some cases also in rounding off or pointing the exposed part, so as at the same time to contribute more or less to its ornamental character; the result is a tile somewhat in the shape of the blade of a shovel flattened, and in some cases approaching the form of the spade pip on cards, and which is fastened, as in the flat tile, by a peg driven through a hole in the short stalk or handle at its upper extremity; these tiles are further ornamented in many cases by the introduction of figures or patterns in relief on their surface; they have the advantage of being easily fixed, and lighter than the plain flat tile, but still necessitate a very high pitch of roof to enable the laps to be perfectly weatherproof. The first departure from the ordinary Burgundian pattern is illustrated by the tiles exhibited by M. Blondeau, which are merely the former with the lower corners rounded off, and a little scoop at each side taken out of the part which is hidden by the superposed tiles. Some of these tiles are more or less ornamented in relief on the surface, and when fixed have a very pretty effect. * * *

In the fourth class we have the edges inclosing one angle of the tile turned up, and the remaining two down, and the tile laid so that the angle first mentioned shall be uppermost, and that the joints shall run in a diagonal direction, by this means continuing the vertical lap all round the tile, which thus enables it to be employed at a much less inclination, and with so little overlap as to have only one-sixth of the surface hidden or useless for purposes of actual covering; in this tile the peg is also dispensed with as a mode of fastening, the tile having a small projection on the back, at its upper part, by which it is attached to the lath, a slight increase of projection in the ledge at the lower angle, which fits into a corresponding depression in the tile next below, serving still further to secure each in its place. (Fig. 1.) This class may be subdivided into such tiles as are square, and those that are lozenge-shaped; of these, the former, known as the tile Courtois, from the name of its inventor, is perhaps the most simple, while the lozenge-shape gives more scope for the introduction of ornament; the square tile has also the advantage of having a less length of joint in proportion to its length, and consequently of having rather more of its surface exposed than the lozenge.

Each one of the tile Courtois weighs 4·5 lbs. and 180 of them are required for a square of 100 superficial feet, so that the weight of this amount of covering would be 810 lbs. and its cost 44s.

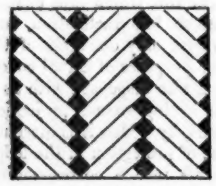
One of the principal exhibitors of the lozenge tile of this class is M. Burdin, of Lyons, whose tile is strengthened by a slight rib along its centre, which adds materially to its ornamental appearance, and enables it to be made extremely thin and light, the square of this description of tiling not amounting to more than 770 lbs. and the single tile being 5·1 lbs.; it is shown in three dimensions, running 150, 250, and 350 tiles to the square, and costing respectively 6*l*., 3*l*. 12s. 6d. and 3*l*. 4s. the thousand tiles, or, for the first two, 18s. the square, and for No. 3, 22s. 6d. (Figs. 2 and 3.) * * *

But, perhaps, the best and most complete exhibition of roofing tiles is that of Messrs. E. Muller and Co. of Paris, who provide not merely for a covering, but also give the means of introducing skylights, either to open or fixed, ventilation tiles, and of employing tiles as flashing, round chimneys, and in similar situations. The form of the tile seems a little complicated, but not at all so as to render it

more difficult to be fixed, or to require a more skilled description of labour for that operation, and this slight complication does not seem to affect the manufacture in any way, their price not differing from that of the average of the tiles exhibited. This tile, which may be better understood by a reference to the cut (fig. 4), has the fillets or flanges along its lower edge slightly returned parallel to the face of the tile; this return being locked into a corresponding recess in the tile next below it, more effectually secures it from the action of the wind, and at the same time gives a water-tight joint without the necessity of a high pitch. The longitudinal joint is formed by two small fillets on the face of the one tile, fitting into two grooves in the reverse of the next, thus being secured by three edges lapping over two, instead of merely one over one as in the tile Courtois. The method of providing for the insertion of a skylight is extremely simple and ingenious; it consists in having a cast-iron frame, with edges made to correspond with those of the tiles, and of the size of one, two, three, or more tiles; this frame forming the skylight frame is fixed in any part of the roof with the same facility as the tiles themselves, and is, of course, in every respect as weather-proof at the joints. Should light without air be required, recourse is had to a still simpler cast-iron frame, with a pane of glass inserted in it; and should ventilation alone be the object, special ventilating tiles can be introduced as often as necessary while laying the ordinary tiles. In the construction of roofs with the tile of Messrs. Muller, not only is the steep slope of an ordinary tiled roof avoided, but the pitch is reduced far below that of an ordinary slate roof, being only one-eighth of the span, or at a slope of one in four. The weight of a single tile on this system is 5·5 lbs. and as it takes 150 to cover a square, it follows that this quantity of covering weighs 825 lbs. or somewhat more than with some of the lozenge-shaped tiles; but this is more than compensated for by the decrease in amount of covering consequent on the alteration of pitch, by the additional security afforded against wind and weather, and by the facility obtained in the fitting of skylights, &c. by the employment of the tiles of Messrs. E. Muller and Co. whose merit the jury of this class has acknowledged by the award of a first-class medal, and whose productions are well worthy the attention of constructors in this country.

* * *

M. Vollant, of Chateaurouge, exhibits several specimens of pavement, some in patterns formed with diamond-shaped tiles, imitating dark and light marbles, interspersed with white, red, and black, the price of which is 6d. per foot superficial, one a chess-board pattern in black and white at 5d. per foot superficial, also one at the same price in which white octagonal tiles are filled in with small square red ones, a sample



at 4d. the foot, in which white hexagonal tiles and diamond-shaped imitative marble make up the figure, and finally a very pretty herring-bone brick pavement, in which small cubes of black brick are introduced with good effect between the ends of the other bricks, the price being 6d. a foot.

We shall return to the report at greater length hereafter.

THE SOULAGES COLLECTION IN RESPECT OF DECORATIVE ART.

We would call public attention to the following able and pertinent report of the committee appointed by the Council of the Royal Institute of British Architects to examine the Soulages Collection, and report their opinion whether it would be expedient to recommend its purchase by the Government, which was read at the meeting of the Institute on the 9th inst.:—

Your committee have to report that, pursuant to your instructions, they have attended twice at Marlborough House, and have also at various periods individually inspected the Soulages Collection, and compared the specimens contained in it with those derived from the sale of the late Mr. Bernal's effects, and other sources. They have experienced the utmost attention on the part of the authorities and officers of the Department of Science and Art, who furnished them with copies of the admirable report drawn up by Mr. Robinson,* and afforded them every facility of access. Before entering upon any criticism of the collection itself, your committee think it desirable to allude briefly to the influences which such a collection may have upon the tastes and studies of the architect, and to the share which architecture, as the controlling spirit of decoration and ornament, has had in eliciting productions in which art and industry are harmoniously combined. For the illustration of such questions, the collection now under notice, containing specimens, ranging generally between the fifteenth and seventeenth centuries, of elaborate works in almost every material applicable to domestic use or embellishment, offers subjects of rare importance, meriting the most serious consideration of all, who would fain anticipate for this country an advance in the arts of design coincident with the great strides which have been made of late years in science and material prosperity.

* The instructive notes and observations appended to each class of objects introduce the reader at once into a brief history and analysis of each division. It is impossible to over-estimate the additional instruction which the publication of such catalogues confers upon the casual visitor of museums and collections in any way analogous to the Soulages.

The Soulages Collection.

The enlarged views in regard to architectural decoration, which have recently revived the taste for ornamental design that some centuries ago was so prevalent in England, render it necessary for the architect of the present day to enter upon new fields of study; to seek for new sources of inspiration; and to acquaint himself with all the formulas of conception to be found in the productions of other branches of science and art than those which are directly structural, in order to qualify himself to take that lead in directing public taste which his position and vocation call upon him to assume. It is indisputable that in every age the sources of design for all classes of manufacture have been identified with the productions of the architect, and frequently derived from his conceptions. Among the ancients the fictile vases and the bronzes may be quoted in illustration of this fact, as constantly borrowing their ornaments from the buildings of antiquity; and, in the Mediæval period, the pillars, the buttresses, the carving, the panelling and architectural divisions, all of which were applied to *fittings* of every description, were adopted from the structural details of the edifices, often with little or no reference to material, or other proprieties of adaptation.

As the architect's development of the artistic element is the highest applicable to the common purposes of life, it is obvious that the revival of obsolete sources of decoration demands the utmost circumspection. To acquit himself conscientiously of such a responsibility, he must neglect no means of information—he must underrate no style, no object, no department, which may contribute to those harmonious effects which it is his province to endeavour on all occasions to ensure. He must enter upon a new career of thought, and acquaint himself with the history and fluctuations that have distinguished each phase of the origin, development, and decay of every class of applied ornament: so as to adopt it with propriety, taste, and originality, as an ever fresh idea, and not as a mere "rifacciamento" of existing forms.

Collections like those of M. Soulages and of the late Mr. Bernal, are of the utmost value to the architect, reflecting as they do the arts, manufacture, skill and taste of various countries and periods; and showing their application to the ordinary uses of life in the several grades of society. No less remarkable are they when set in contrast with the industrial practice of the first quarter of the present century, a period of singular barenness in technical design, since they serve to bear only a more vivid testimony to the extent to which art was applied in the most trifling and ordinary utensils and objects, during those palmy days of Italian grandeur when were executed the majority of the specimens of which these collections consist. During such periods the sentiment of art would appear to have been absolutely necessary to commend the productions of the skilled mechanic to general acceptance. And it is remarkable to observe that taste never became the exclusive property of any one department or class of productions, but reigned a universal element; the decline of purity in any manufacture being but the sign of a general and concurrent deterioration in every other. Such collections represent a world-wide school, in which to form a universal rather than a particular standard of national taste; and thus the student is freed from the trammels of that confined view of style which the traditions of any one period, limited within a narrow geographical circle, would bind around him. France, Italy, Germany, and England, have furnished their quota of excellence in many ways to the specimens now brought together in Marlborough House; and from the very distinctive peculiarities which characterize the various productions, a wider field is afforded for the wares of the manufacturer of the present day, fresh tastes are excited, and an earnest longing is created in the purchaser for the possession of more refined and excellent productions, raising them above mere mechanical results, enlarging their sphere of application, and necessarily stimulating production.

There can be little healthy progress in national manufacture so long as the commonest and mere material wants only have to be satisfied; but directly cultivated taste seeks for superior execution and more refined elegance, enterprise and skill are enlisted in the gratification of these tendencies, progressive improvements constantly arise, industry and commerce gain by the movement, and the material prosperity of those engaged therein necessarily follows.

Enamels.

There are many arts which once flourished in this country, and which have been applied only in a very limited manner within a century or two, while there are others which have never received in Great Britain the development of which they are capable, and which in other countries have been productive of very important results. Enamelling was at one time extensively used in England, as we may see on the metallic monuments in Westminster Abbey, some of the recumbent figures of which were covered with elaborate ornaments of this nature, as also the heraldic shields occasionally inserted in brasses. It is now almost entirely confined to smaller works of the jeweller's craft, or elaborate reproductions of choice pictures and portraits: whereas in the Bernal and Soulages collections are to be found medallions and plates of considerable dimensions, and the art applied to tazze, inkstands, and salt-cellars, enriched with most delicate arabesques and historical subjects. Such specimens give renewed hope that we may ultimately realize, at moderate cost, the process of enamelling on slabs of lava, brought under the attention of this Institute some years since by an honorary and corresponding member, Mons. Hittorff, now President of the Section of Fine Arts of the Institute of France, or medallion portraits of a nature somewhat similar to those introduced in the façade of the Academie des Beaux Arts, at Paris, by Mons. Duban. There seems no reason, if public taste afforded the encouragement, why enamelled panels might not be successfully introduced as an architectural decoration, durable as to material, brilliant in colour, and unchangeable in effect. A notable instance of such an application of enamel existed in the famous Chateau de Madrid, in the Bois de Boulogne, Paris, which has been the theme of praise by all writers who have mentioned it. The façade was adorned with enamels 5 feet high by 3 feet 4 inches wide, nine of which still exist in the Hôtel de Cluny.* Were such panels capable of being multiplied at a moderate cost, we might from time to time introduce in our buildings a series of all but imperishable portraits of our sovereigns, of eminent men, and historical characters; not, as in past times, confining the subjects of such enamels to the twelve Cæsars, the Labours of Hercules, or such pedantic abstractions, but adopting themes from our own poets, writers, and historians; and these would come more home to the feelings, and commemorate for popular honour and respect those celebrities who have illustrated our own history and have rendered eminent services to our country.

Medals.

Medal die engraving is at present of very restricted application, being generally limited in this country to too small a class of objects; and little patronage is bestowed upon what was, among the ancients, and after the revival, a most important department of art production. The medals and coinage of antiquity are upon a par with the productions of Phidias, Lysippus, and Praxiteles; and the coins of Sicily, and many towns of Greece, the medals of Alexander and his successors, as well as the Roman Imperial series, reflect the genius of the brightest eras of antique taste and skill. Of scarcely inferior merit were the Italian medals; and the medallions of various sizes—whether cast or struck—of the fifteenth and sixteenth centuries, are full of intense meaning, handing down to us, with the utmost vigour and refinement of expression, the lineaments of the great, the noble, or the illustrious of these periods.

Of such gems, the Soulages collection contains 106 specimens, chiefly of Italian and French art, struck or cast, presenting many varieties of treatment, and suggestive of an useful application of such memorials in modern times, combining valuable æsthetic results with historical records of an almost imperishable nature.

Glass.

The brilliant progress which has been made in the manufacture of glass in this country within the few years that have elapsed since the removal of those fiscal restrictions which arrested all improvement, and threw this country behind others, invests the articles of this class in the Soulages collection with great interest. Without entering into the technical processes of the "laticinio," "vitro di trina," "millefiori," "aventurine," and "schmelze," some of which are already practised in England, we may at once confidently predict that the study of choice specimens like those presented to view in Marlborough House will lead to the development of new combinations,

* It is said that some were purchased by Englishmen, and are now in this country. It would be a great service to the arts if they could be discovered, and exposed in the Great Exhibition about to be opened at Manchester.

which will some day distinguish our English manufactures as much as, if not more than, their Italian or Bohemian predecessors. The rapid advance in the scientific manufacture of glass, and the new applications of that material which have recently been brought to light for the supply of architectural requirements, are alone sufficient to convince us that this art is capable of the utmost development through English enterprise.

Bronzes.

The 106 objects in bronze, comprised in the Soulages collection, illustrate a class of manufacture hitherto of very limited application in England; whereas, in her Eastern dependencies, the artists in bronze for centuries past have produced, even in common utensils, elegance of form and unrivalled decoration in metallic inlay. This latter elegant process, which was of essentially Oriental origin, was eagerly adopted by the Venetians, and reproduced in their Damascened ware.

Tens of thousands of French artizans are maintained by their skilful treatment of bronze, now an essential article of furniture in that country, and purchased with avidity in England, and indeed throughout Europe and America. So unpractised are our founders in the successful casting of such delicate objects, and so deficient are we in educated chasers and finishers, that we have to depend mainly on foreigners for the supply of small bronzes. Their production by English manufacturers is, indeed, so costly, that the Art-Union of London (who for many years devoted much attention to the subject, and at great expense brought out various statuettes and busts), anxious as that body are to encourage the art, have been almost compelled to abandon the attempt to any great extent, and only persevere under the most discouraging circumstances. The beautiful works of art in bronze, so abundant in Paris, find no rivalry here. And we feel, therefore, that the acquisition of the specimens in this collection, although far too limited for the urgent necessity that exists for the supply of good models in this branch of industry, would be desirable, as tending to draw public attention to this important and neglected branch of art manufactures. We do not venture to class them in design or execution with the matchless productions of antiquity, such as those preserved in the Museum of the Studij at Naples—or even with modern ones of the highest class of art—but still there are many objects gracefully composed, elegant in form, and especially suggestive of improvement in those departments of domestic economy into which they might be introduced with propriety.

Decorative Furniture.

There are 100 pieces* of furniture and textile fabrics, consisting of chairs, cabinets, coffers, tables, buffets, dressoirs, metallic mirrors, a magnificent lanthorn, the cornice of a room, three pairs of bellows of tasteful design and execution, and an elaborate chimneypiece. These present a store of useful and applicable articles of various merit. Some few are carved with considerable skill, others are distinguished for their general design or graceful proportions. Some have been considerably repaired or modified by inferior hands, but others remain intact. The buffets and armoires are suggestive, and admit of easy application to our present uses. The chestnut-wood coffers, the marriage-chests of Italian history and romance, have evidently originated in a superior class of artists, and the metal mirrors, with their carved frames, are graceful illustrations of a curious variety of domestic utensils. In all these articles it is necessary to discriminate between the production of the manufacturer who repeats, and the treatment of his material by the artist who originates. We may still be enabled to recognise clearly those forms and expressions of original ideas, vulgarised by the common taste of those who repeat, or demand repetition; for, although course in parts or gross in detail, they may still retain some of the elements of that antecedent period, when livelier imagination, more refinement, and truer sentiment prevailed. The textile fabrics contain some very elegant ornamental patterns, and several curious specimens of embroidery.

Majolica.

We have reserved for our concluding remarks the most numerous and most important section of this collection, namely, the Majolica, and enamelled earthen and stone wares, consisting of 168 pieces.† We shall not enlarge upon the mutual relations of art and material, nor upon the extent to which all branches of fine art are influenced by the materials employed. This is especially perceptible in the earthenwares of Greek art and Majolica, in contrast with the porcelains of Asia and Europe, and their works in this class are as distinct as the earths of which they are composed. Nor do we pretend to review the various processes of manufacture, nor the mysteries of the glaze and brilliant lustres, which give so much attraction to these admirable productions, such as the metallic reflexions, the changing colours, the mother-o'-pearl of Gubbio, Urbino, Pesaro, Caffagiolo, Faenza, Castel Durante, or of other towns or states of Italy, where the enlightened patronages of the dukes and princes to these wares realized a reputation that could hardly otherwise have been acquired by places of such secondary importance. The earlier pieces of Majolica retain much of the noble simplicity of form and richness of decoration of their Hispano-Moorish origin; and the later ones have a higher aim than the porcelains of Germany and France, whose art decorations occasionally present a fantastic and capricious application, and generally a minute and highly-wrought elaboration by superior artists, almost too precious for the frail material upon which it is bestowed, limiting the products to the tables only of the most affluent.

The Majolica on the contrary, admits, when once the design is settled, of a rapid execution by practised secondary hands: by this economy in the production most carefully designed objects may be brought within the means of the humbler admirer of art. This series includes some choice specimens* of Bernard de Palissy's skill, and embraces every class of object fitted for the table, or to adorn the buffet or dressoir;—such as plateaux, plâques, vases, plates, fruttiere, tazze, trays, or baskets, cups, flasks, bowls, ewers, sauce-boats, salt-cellars, and other articles. The finest of these are grouped in one case, and constitute a series of the highest æsthetic value, as regards their form, the combinations of colour, and treatment of decoration. They are available as types, or may be considered educationally as specimens to be followed, improved, or varied: there is not one which is not valuable for the one or other purpose. The success may be problematical of any attempt to derange the predilections and established favour with which the public have been accustomed to regard certain articles of use in common life; but we believe that the public mind is prepared and anxious to adopt a higher state of art-treatment in such objects.

Without advocating for a moment a blind adherence to any of these forms, or the modes of decoration which distinguish these wares, in which occasionally the execution may not rise to the dignity of the subject—in which extravagance may now and then have usurped the place of good taste, and in which noble forms may be here and there applied to inferior uses,—we may clearly recognise so much that is noble and brilliant, so much that is full of feeling and expression, and such an appeal to a higher intelligence, as to warrant our maintaining distinctly, that access to such examples must improve the taste of the people, and elevate the aspirations of every mind for something better than those we already possess. This consummation we are indeed justified in prognosticating (from the successful efforts in Majolica made by the firm of Minton for the Paris Universal Exhibition of 1855), our own countrymen on the banks of the Trent and the Severn are fully able to attain. From these exertions we may reasonably contemplate that in a few years, by the teaching aid of such examples as those contained in the Soulages Collection, by the union of manufacturing skill in the manipulation with artistic power in the embellishment, and by due encouragement from the public, Majolica will become in this country a most attractive and very important branch of art production, and eventually compete with the ceramic works of any period and of any country.

In conclusion, we have to report that we are unable to contemplate, without the deepest regret, the possibility of such a collection being broken up and scattered into various channels. Each individual piece has its own peculiar value or merit; but when combined with others, as illustrating either the theory or history of art, so as to complete the chain and connexion of manufacture and art illustration, and thus forming a series of the progressive excellence to which such productions have been carried in times past, their worth is much enhanced. If Government were to rely upon the chances of a sale, they would probably be outbid for the best articles by wealthy individuals, who would gratify a taste at a fancy price, and thus the museums of the nation would have in such an event only the chance of obtaining secondary articles, purchased at greatly enhanced cost.

In making this report, the committee have deemed it more advisable to submit their opinions, based, after a careful examination of the objects, upon a broad and general consideration of their importance as a whole, and as a commencement and very desirable contribution, with the series obtained from the Bernal Collection, towards a large and complete historical and artistic museum, rather than upon a minute criticism of any individual specimens. And they have come to the conclusion, that it would be an irreparable loss of a great opportunity to improve our manufactures, to enlarge the sphere of art application, to increase our commerce, and instruct the public mind, if the Government did not accept the offer to sell the whole to the nation at cost price;—an offer so nobly made by the disinterested and public-spirited men who, with singular generosity, and on their own responsibility, have at all risks afforded the opportunity to the country of securing the collection in its entirety.*

T. L. DONALDSON, Chairman.	E. I'ANSON.
S. ANGELL.	T. H. LEWIS.
A. ASHPITEL.	A. SALVIN.
TALBOT BURY.	G. VULLIAMY.
BENJ. FERREY.	T. H. WYATT.
C. C. NELSON, W. D. WYATT,	Hon. Secs.

January, 1857.

BRITISH INSTITUTION.

THE annual exhibition here of pictures by living painters is now open to the public. If there be any difference, the collection is rather below its average standard of merit, there being few works of particular excellence, although the exhibiting list comprises the names of many who have been designated "rising artists," for these twelve years past; nor are there many showing promise or progress of that ambitious character likely to encourage the expectation of those who hope to discover that the effects of increasing patronage, amongst other advantages afforded to the present generation of aspirants, will produce a stock of fine painters. Nor is such expectation unreasonable with efficient organization of our Fine Art Schools: on the contrary, it is a matter of surprise that season after season should elapse, with no perceptible change in the character of our exhibitions, after all that has been said, written, and done to aid improvement. Opportunity, it might reasonably be surmised, would awaken effort; and surely there are some able, if only willing, to do as much as their precursors at least, if they would concentrate whatever ability and skill they may possess on one or two important undertakings, rather than dissipate the same throughout some dozen trivial perfections; or if these same dozen embodied a single new thought in each, it would be a decided advance, and a theme for congratulation. The deficiency in this respect is more than usually suggested by the absence of Linnell's powerful landscape pieces, and the three or four excellent dramatic portraits with which Mr. J. Sant has been wont to delight its frequenters,—which indeed, with the considerable assistance of Mr. Ansdell's delineations of animal life, have lately been amongst the chief attractions of this gallery.

Taking first into consideration the comparatively scarce "subject pictures," Mr. L. Haghe's (2) "Sunny Hours" is a very conspicuous performance, forcible in colour, well composed, and *only wanting* in that delicacy,—aërial perspective,—for which he is so renowned as a "water-colour draughtsman." Mr. J. Gilbert's (76) "Regiment of Royalist Cavalry at the Battle of Edgehill," would also be the better for some of the attributes of his drawings: so loose a style of execution, although accompanied with an impressive dash, is more akin to carelessness than power, a fault to be regretted the more in an otherwise clever work, reminding one of Velasquez.

The title of (180) "The Pliant Hour," by W. P. Frith, R.A. is appended to a version of "Othello relating his Adventures to Desdemona." The personages are not Shakspearean, and yet are components of a successful and charming picture, in a technical sense. (458) "Molière Reading his Comedies to his Housekeeper" is agreeably portrayed by Mr. T. P. Hall: the result, somewhat marred by theatrical treatment, betokens careful study in its compilation, embracing almost too many good points to appear a probable and natural incident.

Amongst the pictures most deserving of examination will be found (1), "The Colossal Pair, Thebes," F. Dillon, presenting the well-known gigantic statues looming through the dusk of an Egyptian sunset, sufficiently invested with poetic and artistic treatment to excite the imagination. (22), "The Pet Rabbit," R. Buckner, evidently a portrait arrangement, inferior to the artist's ideal conception of (348)

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* Artistic in general effect are 660, 670, 691, 693. Nos. 655, 656, are to be praised for their design and execution; and 670, 671, for exquisite design and workmanship.

† Very satisfactory in point of design are the arabesques named Nos. 1, 2, 4, 5, 7a, 7b, 7c, 28, 29, 35a, 36, 39r, 41, 43, 154, 118, 127, 65, 72, 75, 76; and in form as well as in decoration, 86, 88, 92, 108, 110; and as works of real art, 3, 6, 8, 9, 89.

* Very high in style of conventional ornament, in design, execution, and effect, are 138, 142, 143, 144.

* After having been submitted to public criticism at Marlborough House since the 7th December, the Exhibition of the Soulages Collection closed on Saturday, 7th February. During this period, it has been visited by upwards of 46,000 persons, which is just double the usual number at ending at this season. Among these visitors as many as 5,125 persons have paid for admission, being ninefold the average numbers paying. We understand that the offer of sale has been made to the Government for 13,620*l.* with the recommendation that if bought for the nation, it may be sent to Manchester.

"A Roman Boy with a Pitcher of Water," though in this the beautifully painted head seems to be out of tone, and not to belong to the figure. (27), "The Island of Murano, Venice," G. E. Hering, is a favourable specimen. (33), "The Molo," Venice, is one of five contributions of the indefatigable Mr. E. W. Cooke, A.R.A. and an exquisite little bit for finish and local truth. (34), "The Convalescent," J. Gow, shows us a boy in bed, paying off in part his great debt of kindness and attention by amusing his little brother with an accordion, and at the same time how the simplest episode in every-day life may furnish a subject for an epic. (42), "Corinne," H. Weigall, a head characterised by much beauty and classic taste. (52), "Cochem on the Moselle," G. C. Stanfield, is the most striking and perfect of his three landscapes exhibited here. (57) "Athens," W. Linton, an expansive view, imbued with an originality and forcible effect at once proclaiming its source. (58) "Beautiful in Death," dolorously informs us of Mr. G. Lance's peacock having become defunct;—that wondrous bird, with whose telling tail, so often dilated, everybody is acquainted, and many know by art. Few can conjecture the amount of size and tears (of the best mastic) spent upon the creature from first to last, and never to better purpose than on this the occasion of its demise; we may hope that galvanism, or some resuscitating appliance, may be resorted to, and that we shall find the tail spreading wider and wider still in a time to come. (65) "The Evening Drink in a Mountain Lake," T. Danby, is extremely luminous, in fascinating lines, verging perhaps upon the meretricious, and decidedly less truthful as a transcript from Nature than (364) "A Summer Evening," in every respect a delightful landscape by the same painter. Mr. E. Duncan has "immortalized" (75) "The gallant Action fought by the British 18-pounder 36-gun frigate *Penelope*, Capt. Henry Blackwood, and the French National Ship *Guillaume Tell*, Capt. Saulmier, bearing the flag of Rear-Admiral Dècres, on the morning of the 31st of March, 1800," with a gusto and power, entitling him to respectful salutation from all Greenwich pensioners. In (82) "Rain Clearing Off," H. Dawson, a difficult atmospheric effect has been well comprehended, and successfully dealt with; and (96) "The Evening Hour," E. J. Niemann, bearing the impress of truth in its deep mellow tones, helps to prove that the collection predominates in this department in other points than number. (172) "A Refreshing Draught," C. Dukes; (197) "The Hay-field," H. Jutsum; and (267) "Early Summer Morning," by the same. (247) "Through the Welsh Woods," H. J. Boddington; (256) "Imogen," W. Fisher; (268) "Interior of a Welsh Farm House," A. Provis; (274) "Dairy Maid," or rather the cleverly-painted "Calves," in which its excellence exists, by G. W. Horlor; (289) "A Summer Morning on the Thames," H. J. Boddington again; (295) "Cactus," &c. Miss Mutrie; (309) "The Music of the Shell," F. Underhill; (310) "On the Coast of Amalfi," H. J. Johnson; (341) "Love's Stratagem," T. M. Joy; (359) "Holding as it were the Mirror up to Nature," W. Hemsley; (374) "Interior, Westfield House, Ryde, Isle of Wight," C. H. Stanley; (407) "Janet Foster," F. Wyburd; (408) "The Vintage," W. E. Frost," A.R.A.; (415) "Thy Will be Done," H. Le Jeune; (418) "Old Woman Reading," G. Smith; and (453), "The Found Cigar," H. Vanseben, will arrest attention, and evoke more or less admiration. (471), "Brighton Diamonds," T. M. Joy, as a pretty conceit representing three of those periodically appearing sea-nymphs whose eyes belie the imputation that beach jewels are a myth, deserves more than a passing note of commendation, because it illustrates the times we live in, and moreover is a good picture of its class. In (483) "The Two Extremes—The Post-Raffaellite," and (485) "The Pre-Raffaellite," Mr. H. O'Neil contrasts, not too invidiously, careless ease with painstaking labour, to the advantage of neither, in spite of the executive ability displayed in both cases, as far as he himself is concerned. To (496) "Pretty Polly," E. J. Cobbett; (499) "The Talking Oak," W. Mow Egley; (525) "A Little Scarecrow," T. F. Dicksee; (539) "A Letter requiring an Answer," W. Cave Thomas; (540) "The Lesson," D. W. Deane; (546) "In the Chimney Corner," T. Earl; and (554) "Gems of the Sea," H. C. Selous, we can but briefly allude, as we have arrived at the limits of space reserved for this notice.

COMPETITION.

Plans for Laying out the White Horse Estate, Norwood.—The first premium of 150 guineas has been awarded to Messrs. Morgan and Phipson, Danes-inn, Strand; the second, of 100 guineas, to Mr. J. A. Bone, of Maidstone; and the third, of 50 guineas, to Messrs. Coe and Beetholme, of Danes-inn, Strand.

ST. JAMES'S, WESTMINSTER.

Some considerable works, as our readers know, have been recently executed at this church. The decayed wooden box porches that covered the entrances to the church at the western end, unsightly, and long a disgrace to St. James's, have been taken down and replaced with substantial erections in brick and mortar. These occupy the space on each side of the tower, and the elevations being made to assimilate in general character, and carried up uniform in height with the body of the church, the appendages assume the appearance of having formed a component part of the original structure. Internally they are made to communicate through the tower vestibule, the bricking up of the basement arches of the latter being removed for the purpose,—the three apartments together thus forming a continuous ambulatory, extending from the footway of Jermyn-street along the entire width of the western front of the church, giving access by doors therefrom direct to the aisles and the nave, and by stairs to the galleries. The remaining lateral entrance from Jermyn-street (originally there was a corresponding doorway on the north side, removed in 1803) has been done away with, bricks and mortar and a window being made to occupy the place of the old door.

The various interior lobby inclosures to the entrances, the stairs and the wainscot cases, which presented numerous ugly bulkhead projections into the interior of the church, detrimental to uniformity, and an encroachment on the congregational space, have all been swept away. The upper western gallery, hitherto occupying the central portion only of the church, has been extended over the aisles to the side walls; the latter a somewhat doubtful improvement, but that the creation of fifty sittings were directly or indirectly involved in it. The arrangement of some of the pewing has been altered, economising the space to the gain of a considerable number of seats;—matters, the importance of which must be judged by the fact, that the only limit to the number of congregation here is the capacity of the church to accommodate. Some further ventilation has been introduced, and the whole interior thoroughly cleansed and re-embellished.

The churchyard has been raised, levelled, and repaved, and the old dingy blank wall fronting Piccadilly is to be immediately taken down and replaced with a handsome iron palisade.

When the present active and estimable rector, the Rev. John E. Kempe, M.A. entered upon his duties in this important parish in 1853, the lamentable inadequacy of 650 free sittings for adults in all the Church of England places of worship in his parish, for the wants of a population of 37,000, and more than half the number poor, engaged his serious attention, and, putting forth a comprehensive scheme for the amelioration of the evil, he appealed to the benevolence of the more wealthy of the parishioners for the means to work it out. The appeal was quickly and liberally responded to by the higher classes of the inhabitants, a list of little more than a hundred names yielding an available fund of nearly 12,000*l.* the principal subscribers being the Bishop of London (Blomfield) 1,000*l.* the Marquess of Bristol, Earls Derby and De Grey, Wilbraham Egerton, esq. (since deceased), and Sir Walter Farquhar, 500*l.* each; the Archbishop of Armagh, Earls of Eglinton and Spencer, 200*l.* each; the Dukes of Norfolk (since deceased) and Cleveland, Earls of Ellesmere, Aberdeen, Falmouth, Enfield, Redesdale, Mrs. Byng (since deceased), Mr. Hudson Gurney, Mr. John Fisher, of Duke-street, the London and Westminster Bank, "A Penitent," and the Branch Bank of England, each 100*l.*; and under the nomenclature of "A Parishioner" (supposed to be the Earl of Derby), 4,000*l.* specially towards the building and endowment of a new church.

The primary object set forth in the rector's scheme was the creation of an additional church, to be situated if possible in the eastern division of the parish, to be built to accommodate about 1,200 persons, half of such accommodation to be free; but the progress of the work has been delayed by the difficulties in the way of obtaining a suitable site. Covered as the entire area of St. James's is with houses or other closely packed valuable buildings, the procuring of the mere half rood of ground on which to erect it, involves an outlay far greater than the combined expense of building a handsome church and furnishing it, and supplying the stipulated endowment for the incumbent. Hence, liberal as the subscribed fund seems, it is as yet insufficient to justify practical operations on this head. It is to be hoped, however, that the opulent traders and manufacturers with which the parish abounds, and whose fortune is the produce of the labour of those who constitute the thousands, the spiritual wants of whom it is now sought to supply, will yet, emulating the example the nobility have set, come forward in liberal support of this good work. The second object in the scheme was to convert into free sittings certain portions of the pew accommodation of the existing churches and chapels of the parish. This has been effected in respect to the district church of St. Luke's, Berwick-street, and Archbishop Tenison's Chapel, Regent-street, and 500 additional free sittings have in that way been permanently provided.

The works just completed at the parish church, projected by the present churchwardens, Mr. Frederick Crane, of Regent-street, and Mr. Rice, of Charles-street, originally without any view to the object, have nevertheless been made subservient to the furtherance of the rector's scheme. Among the improvements the proposed alterations in the church were to effect, was the gain of considerable interior space, on which it was intended to set up pews, and the rental arising from the letting of these was to compensate in some degree for the outlay. But the rector, feeling that additional church accommodation was more needed by the poorer portion of his parishioners than the richer, made a proposition to the churchwardens to obtain from the committee of his "Free Church Accommodation Fund" a grant of the sum of 500*l.* towards the cost of the works, on condition that the additional church room gained by the alterations should be appropriated to free sittings. The offer was accepted, the stipulations have been fulfilled, and 150 free sittings have been thus obtained, which, together with 120 sittings contrived and set up in the church by Mr. Crane three years ago, when in connection in the churchwardenship with a former colleague (the late Mr. Sasse), this movement has given to the parishioners a permanent accession to the free accommodation in the parish church of 270 sittings,—more than doubling that which existed before; whilst the pew accommodation, and the rental therefrom, have suffered no diminution. The expense of the present works has been about 3,000*l.* and these have been carried out, as already mentioned, under the superintendence of Mr. Charles Lee; and executed by Messrs. Patrick and Son in a very satisfactory manner.

This church, as every body knows, stands on the south side of Piccadilly, and, architecturally considered, is remarkable, externally, only as a mean-looking dark red brick building. It was consecrated in 1684.

Comparatively few of the many thousands who make up the living throng that daily traverse this great western thoroughfare, are aware of what an elegant interior these ugly brick-cased walls inclose — light, airy, and capacious. That Sir Christopher Wren himself—who, besides St. Paul's, built more than half a century of parish churches—regarded this his *chef-d'œuvre*, is seen by his letter to a friend, printed in "Elms's Life of Wren," as follows:—"Churches must be large; but still in our reformed religion, it should seem vain to make a parish church larger than all who are present can both hear and see the preacher. The Romanists may indeed build larger churches, as it is enough if they hear the murmurs of the mass, and see the elevation of the host, but ours are to be fitted for auditories. I can hardly think it practicable to make a single room so capacious, with pews and galleries, as to hold above 2,000 persons, and all to hear the service and see the preacher. I endeavoured to effect this in building the parish church of St. James's, Westminster, which, I presume, is the most capacious, with these qualifications, that hath yet been built; and yet, at a solemn time, when

ST. JAMES'S, WESTMINSTER.——SIR CHRISTOPHER WREN, ARCHITECT.

the church was much crowded, I could not discern from a gallery that 2,000 persons were present, in this church I mention, though very broad, and the nave arched up. And yet as there are no walls of a second order, nor lanterns, nor buttresses, but the whole roof rests upon the pillars, as do also the galleries, I think it may be found beautiful and convenient, and, as such, the most economical form of any I could invent."*

The plan of St. James's is the Basilical, nave and aisles being formed by two ranges of six piers and columns, in two stories. The piers, which are of the Doric order, panelled, carry the galleries, the fronts of the latter of oak, with carved enrichments, forming the entablature of the order, with a low attic above, to complete the breastwork. The upper order is the Corinthian. Columns rise from the breastwork of the galleries, and the highly-enriched entablature of these, stretching across from each column to the side walls, serves as imposts to a series of transverse arches from column to column, forming the covering of the aisles; whilst from the abaeuses also springs the great semicircular vault that covers the nave; the whole roof being divided into sunk panels, ornamented with festoons of drapery and flowers in relief, "producing," as Mr. Gwilt observes, "by its unity, richness, and harmonious proportions, a result truly enchanting."†

A slight prolongation eastward of the central portion of the body of the church forms the altar recess. The end above the altar screen is nearly all occupied by a Venetian window. This is made into two tiers by a massive transome, which, with a pair of columns in the lower portion, and a pair in the upper, serving as mullions, subdivide the window into six compartments.

The lower tier is uniform with that of the upper story of the body of the church, and the architecture the same, *i.e.* Corinthian—the entablature of the order forming the transome of the window. The upper tier is composite. The centre intercolumniation is connected by a semicircular arch. In 1846 this large window was filled with stained and painted glass. The window is illustrative by six principal pictures,—one to a compartment,—of the Narrative of our Blessed Lord's Sacrifice for the Redemption of Mankind. In the lower central division is displayed the Crucifixion, with the praying in the Garden of Gethsemane, on the left; and, the Bearing of the Cross on the right. The upper central compartment is the Ascension, with the Entombment to the left, and the Resurrection on the right. Very wide mosaic borders surround each of these pictures, in which, as well as in the other parts of the filling in, are numerous minute representations of other scriptural subjects; with details of immense variety, consisting of religious emblems, symbols, monograms, &c. &c. This glass was the production of Mr. Wailes, of Newcastle, who received 1,000*l.* for the work.

It is intended also to fill in with stained and painted glass the whole of the ten gallery windows. The work is to proceed gradually, as funds shall arise for the purpose; or by accepting of windows from individuals in the way of offerings,—mortuary, or obituary. The whole is designed to form, when completed, a series of paintings, illustrative of the history of our blessed Saviour's life and ministry, commencing with the "Nativity," in the easternmost window on the south side,—the succeeding windows to carry on the subject, progressively, as follows:—

No. 2. The Adoration of the Magi.
„ 3. Baptism of Christ.
„ 4. Christ and the Woman of Samaria.
„ 5. Christ with Peter on the Sea.

And returning eastward on the north side with

No. 6. The Transfiguration.
„ 7. Christ with Martha and Mary.
„ 8. Christ Blessing Little Children.
„ 9. The Raising of Lazarus.
„ 10. Entry into Jerusalem.

Thus connecting the narrative with the Passion, as represented in the great altar window. Nos. 2 and 4 have been executed (also by Mr. Wailes) at a cost of 125*l.* each.

The altar screen displays a most exuberant piece of carving, in alto-relievo, executed in lime-tree, by that inimitable artist in that way, Grinling Gibbons. The principal group represents "The Pelican in her Piety." Bishop Fox's favourite device, typical of our Saviour having shed his blood for us (though the allegation of the ancient naturalists as to the habit of the pelican being to feed her young with her own blood, when other food was not immediately procurable, on which circumstance this long popular symbol was founded, is now disproved). In this beautiful work of art, the pelican occupies the centre, over the altar-table—is represented as sitting in her nest, and in the act of wounding her breast with the point of her beak to draw the blood, whilst the young ones beneath are gaping for the food. The bird is covered with a beautiful combination of foliage, among which are two doves bearing olive branches. In addition, a noble festoon ending in two pendants, which extend nearly the whole height of the screen, displays all the varied representations of fruit and flowers, in the highest relief. This elaborate and delicate work having become much injured by the casualties of 160 years, was in 1846, thoroughly repaired by two Italian artists—a work of protracted labour; several thousand bits of carving, of more or less minuteness, requiring to be added, in order to restore the groupings to their pristine state.

The font, which stands in the central passage, opposite the principal entrance from the west, is an exquisite work of art, in white marble, from the chisel of that same admirable artist. The sculpture is intended, by the representation of four scriptural subjects, to tell the story of the fall of man—his subsequent restoration to Divine favour, and his regeneration by baptism, viz.—the stem or support to the basin is the tree of good and evil; Adam and Eve stand at its foot, whilst the serpent, coiled round the trunk of the tree, is presenting to them the forbidden fruit. On the side of the basin, which is circular, and 6 feet in circumference, are, in basso relievo, Noah's Ark, with the dove bearing the olive-branch of peace in its beak, St. John baptising our Lord in the Jordan, and Philip baptising the Eunuch. The pewing and other wood fittings of the church, are of Dutch oak, were set up in 1803, and cost, inclusive of some repairs to the church, upwards of 11,000*l.* An upper tier of gallery, at the western end, contains the organ and seats for the choir, as also the school children. The organ is in two oaken cases, standing one before the other, the organist's place being between them, his face to the great organ, and his back to the smaller one, to the latter of which the action passes beneath his feet and seat. The great case is in the florid style of the period of its original construction (Louis XIV.). The carvings of Fames, angels, cherubs' heads, &c. with which it is adorned, strikingly mark, by their great beauty, the master-hand of Gibbons. This favourite old instrument, originally made by the celebrated Renatus Harris, anno 1678, was entirely rebuilt by the late Mr. Bishop, in 1852, on a much more comprehensive scale, but retaining the old pipes—for these, the mellowing hand of time had rendered of more than ordinary value,—when also the old case was restored, with the original decoration, and the detached front choir added. The expense of this work was 1,000*l.* and the organ is now one of the most beautiful in the kingdom.

F. C.

CHAIN BRIDGES.—Mr. Edward William Young, of Rochester, has patented an improvement in the construction of bridges. According to this invention the platform or roadway of a bridge is suspended from chains which do not hang in curves, but descend in straight inclined lines from the points of suspension to the platform of the bridge.

* The steeple of St. James's Church was not the work of Sir Christopher Wren. It was built a few years after the church, and was first brought into use by Mr. Wilcox, a carpenter in the parish, which, strange to say, was made choice of by the vestry in preference to a design for the same furnished by Wren himself, the cost of the erection of which was estimated to exceed the other by only 100*l.* The builder of the steeples of St. Bride's, St. Vedast's, St. Dunstan's-in-the-East, and Bow, beaten in a competition for that of St. James's, Westminster, by a carpenter!

† These ceilings, and their enrichments, as now seen, were put up in 1837, when the decayed state of the timbers had rendered an entire new roof to the church necessary. The work was strictly a restoration, and was executed under the direction of Mr. Charles Mayhew, architect: the expense on the occasion was 4,350*l.*

THE ARMOUR IN THE MANCHESTER EXHIBITION.

MANY antiquarian friends will be glad to hear that Mr. Planché has accepted the invitation from the Committee of the Exhibition of Art Treasures, to superintend the arrangement of armour and arms. We may therefore feel certain that in this department we shall have a correct chronological arrangement, to instruct as well as please. It would be a fortunate thing if, when this matter is finished, Mr. Planché could be led to give his services at the Tower of London, where the national collection appears to be left pretty much to itself. So far as we can learn, no person having knowledge of the subject ever pretends now to exercise any control there, or has any interest in making it complete and available for public instruction."

PROVINCIAL NEWS.

Smethwick.—A parsonage-house for St. Matthew, Smethwick, being about to be erected (Mr. Joseph James, architect), the following tenders have been made for the erection:—

Cornish, Brothers (Birmingham) ...	£896
Harley (Smethwick)	850
Ramsay (Smethwick)	841
Stockton and Field (Oldbury).....	787

Stourbridge.—The new National Schools at Amblecote were recently opened by Lord Lyttelton. These schools are built on a site given by the Earl of Stamford and Warrington. Nearly 1,700*l.* have been secured for the cost of erection.

Llandudno.—The commissioners under the local Improvement Act have entered into a contract with Mr. Knight, of Manchester, for the drainage of the town. The plans and specifications have been prepared by Mr. T. M. Smith, of London, C.E. under whose superintendence the whole is to be carried out. The works are being commenced, and are to be completed by August next.

Shrewsbury.—Under the Limited Liability Act, a project has been started for erecting a public hall in this town, to accommodate from 250 to 300 more persons than the Music-hall. The room is designed to be capable of being divided, without injury to its architectural decoration, so as to render it suitable to small or large assemblies.

Brewood.—The *Wolverhampton Chronicle* states that the newly-erected church for the district of Coven, in the parish of Brewood, was consecrated on Thursday in week before last. The edifice is in the Transition style. It consists of a nave, 62 feet by 24 feet 6 inches; two transepts, 15 feet by 15 feet each; a chancel, 16 feet by 16 feet 6 inches; together with vestry, south porch, and gallery at the west end of the nave. At the south-west corner is a turret terminating above the roof octagonally, and surmounted by a small spire. The ground-floor contains 326 sittings for adults, and the gallery upwards of seventy sittings for children. The stone used in the building is from the Brewood quarry, and is the gift of Thomas William Giffard, esq. of Chillington. The woodwork, except the pulpit and desk, is all deal, stained and burnished. The roofs are open and high-pitched, with arched braces to the principals. The architect was Mr. E. Banks, of Wolverhampton; and the builder Mr. Godfrey, of Birmingham. The whole cost has been estimated at 1,900*l.*

Liverpool.—At a recent meeting of the Toxteth-park Board of Health, a draft plan, prepared by Mr. Newlands, the borough-engineer, of a scheme of sewerage for the district, was submitted. The estimated cost for carrying out the plan was 9,000*l.* The proceedings were confirmed, and the clerk instructed as to farther procedure.——The new large floating landing-stage, for Prince's-pier, is drawing towards completion. It will be brought over in four sections from Birkenhead, where it is being constructed by Messrs. T. Vernon and Son.

Eslington.—Lord Ravensworth is now making numerous improvements at Eslington House, amongst which are conspicuous a terraced wall and a gateway in the centre, adorned with vases, designed by his lordship. The execution of these designs has been intrusted to Mr. D. McMillan, of Alnwick, sculptor.

SCHOOLS OF ART.

The Norwich School.—On Wednesday evening, the 28th ultimo, a meeting of the students in this school was held at the rooms to receive prizes awarded by Mr. Redgrave, the Government inspector. The mayor, who presided, said he had attended at the request of Mr. Nursey, the master, to distribute the prizes. He was glad to see so large an attendance notwithstanding the roughness of the weather. He considered that it was highly creditable to the students that out of 200 students seventy-nine of them should have received prizes. The Rev. J. Crompton briefly addressed the students, advising them not to stop at the outwardly beautiful, but to aim at whatever was beautiful in the highest sense. Mr. J. G. Johnson said the number of students who had received marks of distinction was highly creditable. He hoped soon to meet them in the new building with a free library under the same roof.

The Reading School.—The provisional committee appointed at a late public meeting, to take the necessary steps preliminary to the establishment at Reading of a school of drawing and design upon the Government plan, have nearly concluded their labours. At a recent meeting of the committee, however, it was reported that throughout the country the demand for able masters was greater than the supply, and as there was no possibility of obtaining an efficient and approved master before March, it was concluded to wait for rooms till that date.

The Newcastle-under-Lyne School.—The annual meeting of this school was held in the lecture-hall of this Institution on the 27th ultimo. The chair was occupied by Mr. Adderley, M.P.; and Mr. Child, M.P. the president, was also present, with the mayor of the borough, and various other influential gentlemen. The room was densely filled. The walls were decorated with works by the students and others. From the report it appeared that the receipts were about 60*l.* and the expenditure the same for the year. The committee regretted to state that the school had not received the support and encouragement which they had hoped it would, and also that the number of students had not been so large as they could have wished; Mr. Child had placed in the secretary's hands a cheque for 10*l.* which was to be offered in four prizes—two during the present year, and two during the following year. The meeting was addressed by the chairman and by Mr. Child and other gentlemen. The chairman in his address said he believed that in the matter of education it was the duty of Government to assist in the improvement of the industrial arts, and to educate those engaged through the instrumentality of their occupation. In this respect he thought Government had made a sad mistake, and that that might help to account for the complaints which had been made of the absence of a thoroughly hearty support of such institutions. He thought that the reason why public schools with large grants from Government were not supported by a larger attendance of pupils was, that the people did not see in them that which they wanted. It was quite an anomalous state of things to have a supply without a demand, and grants of public money had been lavished upon the country in order to stimulate the demand. The education adapted to the people was not an education in the highest branches of philosophy, but such an education in the arts of industry as would quicken and strengthen the intellect; and to pass over this training was, he was convinced, a great mistake, which lay at the root of national education. He hoped the country would see this mistake, and would urge its correction upon the Government. The chairman then called the attention of the meeting to the efforts made by Prince Albert to spread correct principles of taste, and expressed his conviction that the country was mainly indebted to his Royal Highness for developing this branch of education. He had not merely encouraged isolated efforts, but had grouped them together in one great national scheme, having its centre in London, communicating with the local schools throughout the country, but not having them under its control, as the schools of France were under the central school at Paris. That was not a favourite principle in this country, and he thought that Government was quite right in saying that it would not do more than aid the schools of art.

The Sheffield School.—The opening of the new building was inaugurated on the 26th ultimo, by a public *conversazione*, at which Mr. Roebuck, M.P. presided. In his address to the meeting the chairman made characteristic allusion to his own peculiarities as a public man in their relation to art. "There is something," he said, "in all that pertains to art of such a perennial and ever-flowing nature that it never palls upon the senses, that it never in any way diminishes in its power to exalt and bless humanity; and, therefore, if we make that the daily avocation of our lives, we do much to exalt the nature of man and to increase our own welfare. This may appear to you a somewhat fine-drawn and sentimental view of things, but I speak to you as a practical man, whose life has been passed in the turmoil and boiling up-stirring springs of life; for my life has been that of one who has had to combat with his fellow men, and I have found that that which has been to me the solace of my life has been art. For though I am an humble pupil of art, still I am an adoring pupil. I love her for her goodness to me; I love her for her elevating influence upon the human race." Mr. Cole, C.B. was also present, and addressed the meeting, and explained what Government was doing in order to assist schools of this description. He spoke favourably of the Sheffield School, and stated that whilst the highest number of medals awarded in one year to any school was thirty, the students in the Sheffield School were about to receive that night twenty-eight; or rather they were not about to receive these, though they were entitled to them, in consequence of the die of the reverse side having broken in striking it. The whole of the art-works for which these medals were given throughout the country it was intended to bring together into one exhibition, and in order that they might not be thought too metropolitan it had been determined that these exhibitions should be held in the provinces. Next year it was intended that the students' works of art should be exhibited in Manchester, and to award for the best types of art 100 of what they were going to call national medals. To get a medal worthy of such an occasion they had sought all over Europe for an artist, and they had succeeded in obtaining the services of a foreign gentleman of great celebrity. Each of these medals would represent 10*l.* for which the student would receive a work of art equal in value to that amount. The speaker then exhibited one or two specimens of the works of art intended to be given to such students as gained the national medals.

Carlisle School.—A *soirée* in connection with the Carlisle School of Art took place on the 27th ultimo, in the Mechanics' Lecture Hall, Carlisle. The only cause of regret was the comparatively small attendance, notwithstanding the attractive announcement that a ball was to follow the tea-drinking and speech-making. The hall was gratuitously lent for the purpose by the committee of the Mechanics' Institution.

SUCH A SNUG BERTH!

RUSH, surveyors, rush; why your talents hiding?
Forward, in a crush; storm the Western Riding!
Eighty pounds a-year, open for contention;
Duties, trifles mere, hardly worth the mention.

Only land-survey, (pastime 'mid your revels);
Then to fill the day, take and plot your levels;
Working plans then draw, fit for high inspection;
And secure *éclat*, with the parts in section.

Engineering skill, relative to highways,
Time will help to kill,—not forgetting byeways;
Then, by way of change, in your morning rambles,
Anti-nuisance range, 'mong the slums and shambles.

Then, from door to door, thus your medley vary;
Rate-collecting, bore needy folks and chary.
Only think! the small surety claim'd for safety,
Not worth name at all, only poor two-fifty.

For eight postage-stamps (justasses are sticklers)
Send, you seedy scamps, for detail'd partic'lars.
Mind and state your age; old uns, don't be nervous;
Haste, ye green, and sage—grown grey in the service.

Oh, what sinecures! cheering 'tis to quote 'em;
Such enticing lures captivate factotum.
Then, surveyors, rush; why your talents hiding?
Forward, in a crush; storm the Western Riding!

STONEY BATTER.

PROTESTS BY THE ARCHITECTURAL ASSOCIATION AGAINST THE DECISION IN RECENT COMPETITIONS.

THE following protests by the Architectural Association have been forwarded as addressed:—

February 10th, 1857.

To the Chairman and Committee of the proposed new Free Public Library and Museum, Liverpool.

GENTLEMEN,—We are directed by the committee of the Architectural Association to request your earnest attention to the following expression of their opinion in regard to the late competition for your proposed new building.

The committee of the Architectural Association viewed with sincere pleasure the earnest expression of your desire to ensure, as far as possible, a fair and honest competition, and they believed it was your wish to obtain for Liverpool another building of which you might justly be proud. Your subsequent selection of a limited number of sketches, thus saving a vast amount of labour and expense to the unsuccessful competitors, the committee think was most judicious.

A design having been thus selected, it was thought that it would be carried out in the usual way, upon your being satisfied that its author was capable of undertaking a work of such magnitude; that he is capable has been sufficiently proved.

The decision finally arrived at caused great surprise and dissatisfaction, not only to the committee and members of the Architectural Association, but also to the profession at large, when, by a resolution passed at one of your meetings, it was determined to give the work into other hands.

Whilst the committee of the Architectural Association sincerely regret that a member of an honourable profession could be found willing to undertake such a commission, they feel that this act of injustice cannot be passed over without protesting against your decision.

In conclusion, the committee of the Architectural Association hope that before it is too late, you will reconsider the matter, and by placing the design into the hands of its author, give him the reward that is so justly his due: thus securing for the town of Liverpool a building that shall commemorate the noble generosity of its founder, the justness of its building committee, and the ability of its architect.

(Signed)
J. A. BUNKER, } Honorary
B. A. C. HERRING, } Secretaries.

February 10th, 1857.

To the Chairman and Magistrates of the County of Middlesex.

MY LORD AND GENTLEMEN,—We are desired by the committee and members generally of the Architectural Association, to request your attention to the following expression of their opinion as to the results of the late competition for the proposed new school buildings for the county of Middlesex.

The committee and members of the Architectural Association having watched with anxious interest the progress of the recent competition, view with extreme surprise and regret the decision which has been ultimately arrived at. It appears to them so unsatisfactory, and fraught with so much injury to the interests, not only of the profession, but also of the public, that they feel it incumbent on them not to allow it to pass unchallenged, in the absence of any other public protest from a professional source. Into the question of the advisability of calling in professional assistance to decide upon the merits of arrangements and details in which you were doubtless more experienced, the committee do not here desire to enter, the fact of your own decision not being in accordance with the advice you had obtained proving, in this case, its inutility. But they take exception only to the final result, and that on the following grounds:—

That having, doubtless, carefully examined and rejected the plans selected by the professional gentlemen you had called in to assist you, the subsequent decision made by yourselves, was the right and just one, inasmuch as it must have been made with more than ordinary care, seeing that you awarded the premiums to those designs you had so selected. And the committee and members of the Architectural Association, cannot but think that your decision should not have been altered, unless some extraordinary advantages were found in the designs you have ultimately decided upon for execution. That these advantages do not exist, may be inferred from a perusal of the allegations made by the architects to whom was awarded the highest premium.

The committee and members of the Architectural Association sincerely hope that you will again carefully reconsider the whole question, and, if you were right in awarding the premiums, then do they hope you will act justly to the authors of the best design, by giving them that which they worked for in common with all who compete, viz. the honour and remuneration of carrying out such a building as is proposed to be erected. The committee of the Architectural Association feel that you cannot adopt any other course without acting unjustly, either to the architects or to the rate-payers, for if the design first selected was the best, then it is an act of injustice to the architects to carry out another design; and if it was not the best, then it is an act of injustice to the rate-payers to pay away 150*l.* for a design that you now say was not suitable. Hoping you will give this subject your earnest consideration.

[Signed by the Hon. Secs.]

NOTES ON THE METALS.

MR. D. MORRISON, of Bordesley Works, Birmingham, has patented the use, in malleable iron casting, of moulds of metal, by preference of cast-iron. By thus employing metal moulds, the same may be used again and again, and the articles cast therein will be more smooth. There is now in progress, at Broomielaw, Glasgow, the largest chain, it is said, ever made in Scotland. This chain is for mooring the buoys of the River Trustees. The iron bar from which the chain is formed measures two and five-eighth inches in diameter, and each link weighs 48lbs. The entire length of the chain will be 120 fathoms. Discoveries of iron in the neighbourhood of Seend, Wiltshire, are going on, and several furnaces are about to be erected.

In the manufacture of Steel, Mr. Chenot's invention, which is at present attracting much attention at Paris, consists in the use of an electro-sorting machine (electro-trieuse) to raise the crushed ore to its maximum standard of richness; in a system of cementation, whereby the most opposite qualities of steel may be produced with certainty; and in the compression of the ore after its transmutation, and before and after cementation into a sponge. By his process, it is declared, can be manufactured from Spanish ore, steel which will not cost above 32*l.* per ton, and be superior in quality to that sold in Paris at 100*l.* per ton.

An iron-bridge to carry the East-India Railway across the river Sone (the ancient Erannboas), has been constructed at the Elswick Engine Works, Newcastle, and is thus described in the *Gateshead Observer*,—The tentative arch is of iron lattice-work, as light to the eye as a fabric of cane. As you pass along the roofed roadway, you have on each side a double-lattice; and over head is the railroad for locomotives. The bridge will be double; that

is, there will be two parallel footways and two parallel railways. Foot passengers and palanquins will use the lower bridge. The Elswick arch is 262 feet long; and though in principle it involves no novelty, some new mechanical devices have been resorted to, resulting in a combination of great strength with great lightness—contrasting remarkably, in this respect, with the wondrous High Level Bridge across the Tyne—which, were it now to be built, would probably consume not more than one-third of the iron actually employed. The number of double arches, resting on piers, will be twenty-nine. We shall thus have a double bridge, with palanquin roads below, and roads for railway traffic above; a footpath also on each margin of the upper way; the whole in round numbers 7,600 feet (or nearly a mile and a half) long—six times longer than the "High Level:" although, literally speaking, the structure will consist of fifty-eight separate bridges, each of which can contract and expand with the temperature, without danger to the stability of the viaduct.

At the Sheffield Exchange last week, a number of files of various sizes, cut by the French machine of Messrs. Prignet and Bernot, were submitted to the inspection of the local merchants and manufacturers. It appears that the patentee has disposed of the license for the use of the machine in France, and is now desirous to do so in this country. The files are said to be of a serviceable character, and the raising of the tooth satisfactory. It is stated by the patentee that the machine is so portable that it can be carried by two men, and that a small engine of one horse power suffices to work six machines. Each machine is said to cut in a day 6½ dozen 16-inch square rubbers, weighing 9lbs. each.

At the Midland Institute, Birmingham, on the 26th ult. Mr. H. Wiggin read a paper on the manufacture of copper. The lecturer took copper ore at that point when it is ready for the smelter, and traced the various processes through which it passes until it becomes good marketable copper, either as tile, cake, or best selected. The mining, raising, and dressing of the ore belonged to the miner and mineralogist only. The principal sources from which our copper smelters obtained their ores, were from Cornwall and Devonshire in this country, from Chili, Cuba, and the Burra Burra and other Australian mines. Cornwall alone produced upwards of 1,200 tons of copper annually. It was from this county the greatest quantity was obtained. Mr. Wiggin afterwards alluded to the term "standard," used in the copper trade, and remarked that he had never met with any one who understood it.

Mr. W. Bayliss, of Birmingham, has patented the manufacture of ornamental metallic tubes, by pressing a plain tube into contact with a mandril, the said mandril having upon it the ornamental figure to be given to the tube, the pressure being applied as described. The invention is applicable especially to the manufacture of taper tubes, as there is difficulty in removing the tube from the mandril if the mandril be of uniform diameter throughout. The tube, however, may be removed from a mandril of uniform diameter by heating the said tube suddenly, and thereby expanding the same.

ELECTRO-TELEGRAPHIC PROGRESS.

Two or three years since we hesitated, like many others, to speak of the Atlantic Telegraph as a really practicable project, or anything but a grand idea, which might, at some distant day, be realized. In this hesitation, however, we felt actuated far less by our own convictions than by an assurance that these convictions, if candidly outspoken, would be scouted by many of our readers, as partaking of the most extravagant credulity. At that time one felt (in a small way) somewhat in the position of Mr. Stephenson, when he was compelled, by the force of opinion, to pretend, before the Commons, that he had the most discreetly moderate idea of running railway trains at some *eight or ten miles an hour*, all the while silently multiplying the ten by five in his own mind, as the true measure of his well-founded expectations. Much so was it with Galileo Galilei, when compelled to pretend to subdue his unconquerable belief that the earth moved round the sun, and, with erroneous denial of its motion on his lips, to whisper to himself, in the silent depths of his own soul, "but it *does* move though!"

Well, the extravagant idea of this time three years, is the actual work of to-day. The clue of clues is now being spun, and in a few short months it will dip into the middle of the great Atlantic, and settle miles beneath its troubled surface,—"a way for the lightning flash," laid down by the God-given power of human genius.

The cable selected for the Atlantic telegraph [we rely on the authority of the *Engineer* Journal], is composed, internally, of a central core of seven copper wires, No. 22 gauge, twisted together so as to form a strand, which is surrounded by three consecutive layers of the finest gutta-percha as the insulating medium. By applying the gutta-percha in three distinct layers, one after the other, any flaw or imperfection in one coating is certain to be overlaid by either of the others. A lapping of yarn saturated with a mixture of tar and pitch is then wound round about the gutta-percha covering, to serve as a bedding upon which the external protecting wires are placed. The protecting strands are eighteen in number, each composed of seven charcoal annealed iron wires—No. 22 gauge. There are, therefore, 133 miles of wire employed in the formation of each mile of cable;—or, for the entire length of 2,500 miles to be constructed, no less than 332,500 miles of wire must be drawn and twisted into 47,500 miles of strand, 2,500 miles of which will be embosomed in a thick insulating coating of gutta-percha, to which the remaining 45,000 miles will be applied as a protection against strain or external injury.

The diameter of the cable, when completed, will only be about three-quarters of an inch, and from the way in which it is made, it will be so flexible, that it may be tied in a knot round the arm without injuring it.

The weight of the cable is slightly under a ton to the mile. Many of the cables hitherto laid have weighed eight to nine tons to the mile.

The cable is capable of resisting a strain of about four tons; and as the greatest depth is 2,072 fathoms or 2½ miles, the maximum of vertical strain upon the cable, which loses about one-third of its weight in water, will only amount to a ton and a half—the difference of specific gravity between the water and the cable.

The cable will, probably, be strengthened towards the middle by the substitution of steel wire for iron wire—so as to bear a strain of about ten tons. The enormous cost of steel wire, and the difficulty of procuring it in any quantity, would preclude it being employed for any considerable distance; and as there is an ample margin or surplus of strength in the iron wire coating, it has not appeared necessary with the mere view of employing the former to postpone the operation for several years and treble the capital required.

The cable is contracted for, in equal portions, by Messrs. Kuper, of Greenwich, and Messrs. Newall, of Gateshead, both firms well-known makers of submarine cables: both are bound to complete their contracts by the end of May.

The machinery employed to spin the cable consists of a large horizontal wheel, round the circumference of which are arranged a series of bobbins of the iron wire strand which is to constitute the protective armour of the cable. The gutta percha covered copper wire, made by Mr. Statham, at the Gutta Percha Works, and subsequently wrapped over with the layer of tarred yarn, is passed through the centre of the vertical axle of the wheel to which the bobbins of wire strand are attached, and is enveloped by the wheel in revolving with a spiral covering of the outer strands.

The distance to be traversed by each of the two vessels in laying down the cable, is but little more than double that already passed over, without difficulty, in laying the line between Varna and Balaklava.

THE "CRITIC" ON ARCHITECTURE.

THE report on architecture as a fine art, founded on the illustrations given in our journal, is still ably continued in the *Critic*. We extract a portion of the article in the current number. Speaking of our view of Canina's entrance to the Villa Borghese, the writer says:—

"We are by no means inclined to advocate the general appliance of strictly imitative design; but exceptional circumstances may arise which fully warrant its occasional practice; and, at all events, we cannot but admire the example before us, considered *per se*, and as tending to keep alive the reverence which is due to the idiocratical perfection of ancient art. Speaking with stern truth, the gate-lodges of a palace should be 'affined and kin' to the palace itself; and such is not the case in the relationship borne by Canina's propylæum to the mansion it pertains to; but, as the error is on the side of superior beauty, we must be critically indulgent, and then we are left to acknowledge the 'beautiful exceedingly.' The question is, whether, with the same amount of substance and decoration, so charming a result could be obtained by the application of any other style, as Canina has produced by his Borghese gateway? What an elegant majesty pervades! how chastely ornate,—how unaffectedly refined,—how simply eloquent! What mental cultivation may we imagine in the body of the volume so gracefully prefaced? We will but refer our readers to the woodcut in justification of our eulogy.

The front of the Clothworkers' Hall, London (see *Builder* for Nov. 8, 1856), would seem to indicate another regal meeting on the 'Field of the Cloth of Gold,' so ornate is it in emblems of civic splendour. It is another proof to the growing appreciation of the Anglo-Venetian Classic, and will greatly enhance the richness of the London street architecture. Its clustered pilastral reliefs, ornate cornice, and fenestral efficiency, are accompanied by much proportional beauty; and the façade is altogether highly creditable to the repute of Mr. Samuel Angell. We could almost wish the uppermost window-openings had been square-headed, since, after all, the architect has felt the necessity of finishing their top-dressings parallel with the soffit of the entablature immediately above; and we would, deferentially, submit to Mr. Angell whether some gain of light to the rooms might not be had consistently with no decrease of beauty to the windows. It may be that the keystones of the three arches have some relation to the support of a largely-projecting entablature of long bearing; but the square-headed openings might be crowned with a cornice which would still more efficiently support the superincumbent architrave. The gradual increase of richness, as the building ascends, is, we think, in the best taste.

In another woodcut of the *Builder*, for Jan. 17, 1857, is a perspective of the interior of the Clothworkers' Hall, the aspect of which is splendidly scenic. Though the general arrangement of the component features is pretty much according to book, there is a superadded force which removes it above the level of common-place. A mere well-informed student of Sir Wm. Chambers might have similarly employed the arcaded 'order,' the clere-story, groinings, and ceiling; but Mr. Angell has shown the accomplished artist in certain superadded details, in their ornamentation, and in what may be termed the emphasis which marks those passages of his composition which are most susceptible of effective treatment. The red granite columns, with their grey granite bases, cannot fail to be imposing, though the material of the capitals (Caen stone) seems to be something under the mark for the crowning member of such costly appendages, unless, indeed, they are to be heightened in effect by colour and gilding. This interior, however, is, at the least, a very excellent specimen of academic Roman design; and as such we rejoice in being able heartily to commend it.

Nothing can contrast more remarkably with the last-mentioned interior than that of the Gallery of the Bank of France, Paris, illustrated in the *Builder* for Jan. 3, 1857. The scenic and theatrical character of the latter, having more to do with the upholsteral than the architectural, depends on the abjuration of all severe criticism, and on an abandonment to mere decorative prodigality. It is of the period of Louis XIV. and emblematises the florid profligacy of his court, in its excess of carving, gilding, and paint.

Trinity Presbyterian Church, Kingsland.—The view of this building given in the *Builder*, 24th Jan. 1857, is comforting to the critical perceptions, for, in connexion with the evidence of an educated taste, it shows invention and considerate judgment. It would, perhaps, be difficult to find so well composed and pleasingly proportioned a steeple among the genuine Mediæval examples of its kind. The buttressing of the tower is far better than is usual. Artistic feeling and constructive propriety go hand-in-hand from base to apex. We only wish the lower gabled canopies near the base of the spire could have a little more projection, so as to allow greater length to the little pillars that support the outhanging angles."

SOCIETY FOR IMPROVING THE CONDITION OF THE LABOURING CLASSES.

I HAVE perused with much satisfaction your valuable article headed "The Provision of Dwellings for the London Poor," contained in the *Builder* of the 7th inst. and fully concur in the justice of your remarks. Permit me, however, to state that you have been led into a slight error in that portion of your article which refers to our "Model Building" in Portpool-lane. I immediately referred to our "Inspector of Dwellings" on the subject, and desired him to write his explanation, which he has done, and which I now enclose to you. I am sure that you will desire to render our society, for which you have always manifested a deep interest, the simple justice of giving insertion to Mr. Holcroft's note.

H. HARWOOD HARWOOD, Hon. Sec.

SIR,—I notice in the last number of the *Builder* a statement that at the "Thanksgiving Building," in Portpool-lane, there is an insufficient supply of water, occasioned by leakage of the pipes. Allow me to state in reply, that there has always been an abundant water supply, but owing to a temporary disarrangement of the valves some little inconvenience has been unavoidably experienced, although they were not "left unattended to." During

the necessary repairs, plenty of water was always obtainable at the other end of the building.

JAMES HOLCROFT,
Inspector of Dwellings to the Society.

H. Harwood Harwood, Esq. Hon. Sec.

*** We willingly comply with Mr. Harwood's request, but it will be seen that there was no error on our part. We simply stated what was the case, namely, that "we were surprised to find complaints made by some of the tenants of a very insufficient water supply," &c. The complaints unquestionably were made. We willingly believe the cause has been removed.

"WOLVERHAMPTON WORKHOUSE COMPETITION."

Having received a letter from the Clerk to the Board of Guardians of the above workhouse, informing me that the Guardians considered my plans to be the second-best, I should wish it to be understood that though I competed, I was under a pledge with Messrs. Bidlake and Lovatt,—likewise they with me,—that, in case of success, we would each abandon it unless we obtained the full per centage.

EDWARD HOLMES, Birmingham.

*** We have also received a letter signed "Robert Ebbels," "Edward Banks," "Griffin and Weller," and "J. R. Veall," wherein they "indignantly repudiate" the motives ascribed to them in Messrs. Bidlake and Lovatt's reply (at p. 78, *ante*) to their first letter (p. 66), and renew their assertion that the latter gentlemen have not kept faith with them. Great pressure on our space prevents the insertion of it, and moreover the case can rest on the above note from Mr. Holmes.

Books Received.

The Year-Book of Facts in Science and Art, for 1856. By JOHN TIMBS, F.S.A. Bogue, Fleet-street. 1857.

ANOTHER year brings round another record of scientific and art valuables, gleaned by Mr. Timbs from many sources, and forming a most useful book of reference in all that relates to the most important discoveries and improvements of the past year, in mechanics and the useful arts, natural philosophy, electricity, chemistry, zoology and botany, geology and mineralogy, meteorology and astronomy. Thus many important steps in general advancement, which might be swamped by subsequent events and subjects of interest, are rescued from oblivion, and so placed as to be easy of access, and likely to be ever and anon turning up again into notice, and fructifying in inventive minds into new discoveries and improvements to be hereafter also recorded. We are glad to note that Mr. Timbs begins to break through his too modest rule of refraining from the expression of personal opinion. The comments of one who is constantly in the habit of reviewing the general progress as Mr. Timbs does, cannot but add value to a work such as this. To the present volume is prefixed a portrait and memoir of Professor Graham, the present Master of the Mint.

Miscellanea.

EVENING CLASSES, CROSBY HALL: HOPE FOR THE DESERVING.—Mr. Thomas Brodribb and Mr. Edward Chaplin, two of the members of this institution, have just been appointed clerks of the third class in the Educational Department of the Privy Council Office, after a competitive examination by the Civil Service Commissioners. The number of candidates admitted to compete for five appointments was twenty-one. This is the second occasion upon which the Lord President has placed at the disposal of the Rev. Charles Mackenzie, as honorary secretary, the privilege of nominating members of the evening classes as candidates for clerkships, and on the former one was successful.

MEMORIAL CHURCH AT CONSTANTINOPLE.—We are informed that the four prize designs for the church at Constantinople, will be shown at the next meeting of the Architectural Exhibition (Tuesday, 17th.)

CLOCK-TOWER, ABERYSTWITH.—The Clock-tower at Aberystwith, of which we gave a view lately (p. 47, *ante*), is in the market-place, being the most central and elevated point available: the dial will be illuminated with gas. The blue lime-stone of the locality is used for plain walling, and the dressings are of free-stone, from the Stourton-hill quarries, in Cheshire. The diameter of the tower is 15 feet above the plinth course, slightly battened up to balcony, and from thence to main cornice. The total height is 72 feet 2 inches to the top of the vane staff. An archway, with ornamented cast-iron gates, leads to a circular staircase to balcony, from which the ascent to the clock-chamber and top of tower is by cast-iron staircases.

SMOKY CHIMNEYS.—In reply to our correspondent, "Z." (p. 56), six or seven gentlemen have requested us to hand their names to the inquirer as ready and able to do all he wants in the way of cure. This, however, we decline. When we give insertion to such an inquiry, it is with the hope of eliciting information for the general good. In the matter of smoky chimneys, however, each case requires to be judged of separately.

THE BUILDING TRADES AT BIRMINGHAM.—There is a continued depression in all the branches of the building trade at Birmingham. Few, if any, public works are in progress, and at no former period did so many "tramps" pass through the town in search of employment. Hundreds of applicants have been relieved by the officers of the various friendly and trades societies existing within the borough.

AUCTIONEERS' EXCHANGE. — An "Auctioneers' and Land Agents' Subscription-room and Exchange" has been established in London, at No. 2, Prince's-street, opposite the Bank of England. The rules and regulations agreed to fix the annual subscriptions, from January to January, at 3*l.* 3s. for individuals, and 4*l.* 4s. for firms, payable in advance. Mr. C. C. Roberts is the secretary. One of the chief objects of this new association is to supply a perfect system of registration, to enable the members more readily to find purchasers for what they may have to sell and obtain investments for those wishing to buy. Another object is the raising of the position and public standing of the profession. The bringing of buyer and seller to one central point is itself an important object for the facilitation of business.

THE LIVERPOOL TIMBER TRADE.—Mr. E. Chaloner, of Liverpool, in his annual wood circular, dated "30th January," on the timber trade since the 31st January, 1856, states that the import has been the largest on record, the aggregate import of all woods showing a total of 477,250 tons, or an average of 1,310 tons per day: it has increased 52 per cent. within the past six years. This difference is almost wholly in spruce deals: square timber has remained almost stationary. Spruce deals have advanced within five months from 8*l.* 15s. to 10*l.* 5s. and again declined to the present price of 8*l.* 5s. per standard. A spirit of speculation has for some time prevailed, and a secret system of withholding the prices of wholesale operations. Returns of colonial fir, in logs and planks, show an increase in import of 1,206,507 feet, or 7 per cent. and in stock 1,444,820 feet, or 17 per cent. whilst the consumption is about the same as the previous year.

ENGLISH ENGINEERING IN BRAZIL. — On the authority of Mr. Neill, the Consul-General for Honduras, we are enabled to state that the works of the Pernambuco railway are progressing favourably under the superintendence of Mr. J. Bayliss, C.E. the representative in Brazil of Mr. Furness, the contractor; that Mr. Penniston, the company's chief engineer, reports most encouragingly as to the solidity of the execution of the works; and that they will be completed before the time originally contemplated; and, from the interest displayed by the people of the country in the undertaking, that the traffic is likely to considerably exceed the prospective estimate. Mr. Bayliss, on the part of his principal, it appears, had been exercising his engineering skill by sea as well as by land, the wreck of the *Marquis of Olinda* steamer, of 1,000 tons, having been purchased as it stood in its wrecked state, forty-five miles from Pernambuco, for Mr. Furness, and half of the hull raised and floated safely to shore by Mr. Bayliss, who was engaged, by last accounts, in recovering the remainder, in the midst of impediments deemed insurmountable.

THE IRON TRADE.—In Staffordshire the trade is reported to be quiet and steady; prices pretty well maintained, but no chance of any advance.

THE NATIONAL MUSEUMS AND THE SOCIETY OF ARTS.—At a meeting of the council of the Society of Arts, on Wednesday, the 4th instant, the following resolution was adopted:—

"That the secretary be instructed to inquire of the Institutions in union whether they consider the time has arrived when, in order to give just facilities, throughout the United Kingdom, for acquiring knowledge in art and science, it is expedient that the National Museums situate in the metropolis and elsewhere, such as the National Gallery, the British Museum, the Museum of Ornamental Art, the Museum of Practical Geology, and the public Museums in Ireland and Scotland, &c. which have already acquired, or may hereafter acquire, by Parliamentary votes, specimens of art and science, should be rendered, as far as may be practicable, useful to the local institutions promoting art, science, and literature, throughout the United Kingdom, especially the Mechanics' and Literary Institutions in union with the society, and free libraries. Should it be the opinion of the Institutions that the time has arrived, the council of the Society of Arts request that they may be favoured with opinions as to how the object may be best carried into effect, and the council will be prepared to afford facilities for the discussion of the subject. That a copy of this resolution be sent not only to the institutions in union, but also to the provincial museums which may not be in connection with the society, and to the free libraries in the United Kingdom."

We are forced to admit our inability to divine the exact object its promoters have in view.

SHAKSPEARE'S HOUSE.—We learn that a meeting of the trustees of Shakspeare's house has been held at Stratford-upon-Avon, when several tenders were received for the demolition of the houses and cottages which surround the birthplace of the poet; and that the tender of Mr. William Holtom was accepted, and a contract entered into for the removal of the premises within one month. It is to be hoped that the trustees are advised by an architect, or much irreparable harm may be done. When we were last at Stratford a careful eye seemed wanting.

ST. PETER'S, STEPNEY.—The new church-schools of St. Peter's, Stepney, were opened on Saturday, 31st ult. by the Bishop of London. The district consists of 13,000, mostly of poor and labouring people, chiefly dock labourers, and the room which has been built, will enable the Rev. P. J. Rowsell to assist and instruct those who, from various causes, do not go to church. The building was erected under the direction of Mr. Chas. Barry, and cost 1,550*l.* There will be here 1,000 children under instruction in this one district connected with St. Peter's Church.

HOLLOW-WICKED CANDLES.—Having seen the article on hollow-wicked candles, signed "An Unemployed Clerk," allow me to say I tried the making of the same candles in 1849, and then found the following obstacle against them;—That the tallow will run into the tube, and stop the air, independent of burning away very fast. If the unemployed clerk will spend as much time over it as I have done, he will find other drawbacks besides that which I have mentioned.—W. J. W.

INSTITUTION OF CIVIL ENGINEERS.—On the 3rd of February, Mr. G. P. Bidder, V.P. in the chair, two papers were read; the first, "On the Varieties of Permanent Way, practically in use on Railways," by Mr. W. Bridges Adams; and the second paper, "On some Recent Improvements in the Permanent Way of Railways," by Mr. P. M. Parsons.

LIVERPOOL ARCHITECTURAL SOCIETY.—The ninth meeting of the session was held on Wednesday evening, the 28th ult. at the Royal Institution, Mr. Huggins in the chair. Mr. Chantrell exhibited several specimens of Staffordshire brick and terra cotta tile, as well as a large terra cotta chimney flue, suitable for dwelling-houses, which, on account of its heat-retaining properties, was said to be an excellent contrivance for creating a draught, and thereby promoting ventilation. Mr. Picton introduced the subject of the action of water upon lead, which led to an interesting discussion, in which Mr. Verelst, Mr. Horner, Mr. Weightman, secretary, and Mr. Dawson took place. A paper by Mr. R. Rawlinson, "On Factory Chimney Construction," was read in his absence by Mr. Picton.

STATUE OF TURNER.—The great painter left by will 1,000*l.* for a monument to his memory in St. Paul's. It is to be a statue, and it is stated that Mr. M'Dowall, R.A. is chosen to execute it.

BEVERLEY MECHANICS' INSTITUTE.—Last week, Mr. Charles Brereton (the mayor) delivered a second lecture here, on "Ecclesiastical Architecture." Notwithstanding the inclemency of the weather, there was a large and respectable audience present.

SMITHFIELD.—I hope you will protest against employing the site of Smithfield as a dead meat market, with its reeking carcasses and disgusting sights and smells, the site being an excellent one for a handsome fruit and vegetable market, instead of that in Farringdon-street, adorned with fountains and other embellishments, so as to make it an attractive promenade as well as a place of business. Surely, even at the eleventh hour, such a desecration of one of the finest sites in the metropolis may be prevented: should it become a meat market, it will probably remain so for generations, with all its nuisances and abominations.—G. H.

NEW PARK FOR GLASGOW.—By the casting vote of the Lord Provost of Glasgow, the corporation have purchased ground on the south side of the river for an additional park, at the sum of 30,000*l.*

THE LATE MR. T. SEDDON.—A meeting has been held to express the sense entertained of the merits of the late artist, Mr. Thomas Seddon, whose death we announced a short while ago. The chair was taken by Lord Goderich. Mr. Ruskin moved, and Mr. Hunt seconded, the first resolution;—"That an exhibition be held during the present season of the works left by the late Mr. Seddon, which shall be open to sale." Mr. Tom Taylor moved the second resolution;—"That out of the public subscription which it is proposed to raise, 400 guineas be given for the purchase of Mr. Seddon's principal work, the oil picture of Jerusalem, from his widow, for presentation to the National Gallery; and that, if any surplus remain after the purchase and payment of the necessary expenses of the exhibition, &c. Mrs. Thomas Seddon's acceptance of it be requested." Mr. Ruskin has consented to act as treasurer, and Mr. W. M. Rossetti, of No. 45, Upper Albany-street, as secretary.

A MONUMENT TO THE PILGRIM FATHERS.—The Pilgrim Society of Plymouth, Mass. are making efforts to raise funds to erect a monument to "the Pilgrim Fathers" on Plymouth Rock. The height is to be 150 feet: it will be crowned by a figure 70 feet in height, and four others, seated upon the buttresses of the pedestal, will have a height of 38 feet. The panels below the figures are filled with alto-reliefs of "The Departure from Delft Haven," "The Signing of the Social Compact in the Cabin of the *May Flower*," "The Landing at Plymouth," and "The First Treaty with the Indians."

THE TRIGONOMETRICAL SURVEY.—Upwards of 2,000 persons are now employed in the trigonometrical survey of Great Britain. Nearly 400 of them are stationed at Southampton, and are chiefly computors, draughtsmen, and engravers. The following maps have been completed, viz.;—Maps of the whole of Ireland, several counties, and large towns in England and Scotland, on a scale of 6 inches to a mile, and of nearly the whole of England, and parts of Scotland and Ireland, on a 1-inch scale. The 1 and 6 inch maps are to be continued for other counties; and large towns will in future be mapped on a scale of an inch to every 40 feet. Plans of all the cultivated districts in the country will also, in future, be made upon a scale of about 25 inches to a mile.

SECURING CEILINGS, &c.—A patent has been taken out by Mr. Newton, of Chancery-lane, for securing the plastering of ceilings and walls. The object is to cause the first layer of plaster to adhere as firmly to the laths as the second layer does to the first, and for that purpose it consists in applying to the joists or girders, or to a ceiling of boards, laths having inclined edges forming an angle with the horizontal plane of the floor, to which the mortar is to be applied, and spread on in the usual manner, so that the tongues of mortar which pass between the interstices of the laths form an angle with the horizontal plane of the floor, and overlap the tops, and are clinched thereto, whereby the mortar is held and prevented from falling.

LEEDS.—A correspondent says,—Several new buildings of great beauty are being erected here. The town-hall, when finished, will be a good specimen of Renaissance work, while the new iron buildings in the market place, in the Gothic style, are noticeable. General education seems to be properly appreciated here: for that purpose a number of Mechanics' Institutions have been founded in various parts of the town: in some of the schools the members of the committees teach the classes gratis, while from time to time lectures are delivered for them gratis by men of ability, who take an interest in the education of their fellow men. The Institutions thought that if they could establish drawing classes they would thereby advance the cause of civilization and better the mechanic's position, by opening to his eyes the world of machinery which is to be seen in drawings and engravings: models of the objects represented he might never get a chance of seeing. The majority of the committees wished that mechanical and architectural drawing would be especially taught, but as the students were ignorant of even the rudiments of drawing, the master, Mr. Charles Ryan, had to begin by teaching freehand drawing from the black board, but have forwarded an application to London for "Dyce's Examples." The schools are getting on very well; and the students, on the whole, are attentive and intelligent. The local committees applied at the central school for a teacher; then the central committee, finding that Mr. White's time was so occupied that he could not attend at these Institutions, applied to the Department for another teacher, and the teacher we have named was sent down.

EYESIGHT OF WORKING MEN.—Mr. G. Y. Heath has addressed a letter to the *Northern Daily Express*, in which he says, alluding, we presume, to what have been called "railway spectacles," now commonly sold by opticians,—"What I want, then, is to call the attention of all workers in metal—fitters, boiler-plate makers, shovel-makers, forge-men, chain-makers, &c. of millstone-dressers, stonemasons, fire-brick workers, plasterers, stone-breakers, or of any others in whose employment the sight is endangered by accident, to the fact that a convenient and cheap form of protection is sold at most of the opticians' shops, capable of effectually warding off either sparks of hot iron or chippings of cold steel, large pieces of metal, or fragments of brick, coal, &c. or hot plaster, and which interferes so little with the perception of objects, that the smallest print may be read through them. And I would urge them most strongly to provide themselves with this simple means of protection."

CRIMEAN MONUMENT AT SHEFFIELD.—A spirited movement is being got up at Sheffield for the erection of a monument to our Crimean heroes who fell during the late war, and the Commander-in-Chief has agreed to lay the first stone. A design has been prepared by Mr. Edwin Smith, of Sheffield.

ERECTION OF CONVICT ESTABLISHMENT AT NORFOLK ISLAND.—The Government, it appears, have decided on the erection of a large prison at Norfolk Island, for the reception of convicts under sentence of transportation, and an order is said to have been forwarded from the War-office to Colonel H. Sandham, director of the Royal Engineers' establishment, Chatham, directing him to hold in readiness one company of that corps, to embark forthwith for Norfolk Island, for the purpose of assisting in the erection of the convict establishment at that station.

THE BUILDING TRADES IN ENGLAND AND IN AUSTRALIA.—The strangest of all strange things is that, with our forty colonies, one and all craving for labour, there should be a single man unemployed in the country. From the accounts in our daily contemporaries of the proceedings of the unemployed building trades in Smithfield, we turn to the file of papers from Australia, and we find from New South Wales that masons there, working eight hours per day, receive 13s. 6d. daily wages; bricklayers, 14s. to 16s. per day; carpenters are receiving 11s. to 14s.; joiners, 13s. to 14s.; plasterers, 12s. to 15s.; painters, 10s. to 11s.; quarrymen, 12s. to 15s. per day. But it is also stated that the bricklayers, and one or two other trades working eight hours per day, are holding meetings in order to obtain still higher rates of wages. How strange the contrast—wide as the antipodes. In London, 10,000 men meet daily to arraign Providence, abuse red tape, declaim against the aristocracy, talk communism, and chant the old strain—"We've got no work to do."—*Australian and New Zealand Gazette.*

TREE-GROWING.—M. Millot Brulé is said to have discovered that the bifurcation of trees is effected by caterpillars and other leaf-eaters eating the buds through the centre. He found, further, that fruit might be dealt with in the same way as the wood, and that by intersection of buds two or four may be made out of one, and the fruit branches multiplied. In the place of those assiduous pruners and intersectors, the insects, he uses his penknife or a bit of stiff paper, and arranges the trees in a way at once the most picturesque and fantastic. Under his fingers the obedient branches assume the most varied and elegant forms: he increases the fructification, and developes the formation of buds according to his wish. Good news for landscape gardeners, if true; but that there is a bifurcating principle in nature, apart from insect action, is evident, even in mineral sublimations: thus arsenic and iodine yield, in combination, when sublimed, a beautiful golden *branch*, and there are various other chemical combinations which crystallize in arborescent forms. The blood-vessels of the animal organism are surely not bifurcated or arboresced by insects! There is doubtless a natural tendency, in vegetable matter, as well as in animal and in mineral, to arboresce.

IRON IN AMERICA.—In Pennsylvania alone there was produced last year nearly 450,000 tons of pig-iron; of manufactured iron, 227,837 tons. The entire production last year was 1,000,000 tons, whilst the consumption was only 1,386,000 tons—a fact in itself which, to a great extent, accounts for the unusually small demand for iron from this country. The iron manufacture in the States, in 1856, was as great as it was in this country thirty-five years ago. In Pennsylvania alone there are now employed 40,000 persons, taking the furnaces, mills, and forges. The capital employed is estimated at more than 30,000,000*l.* sterling.

GOODLET'S AIR PROPELLER.—An immense concourse of persons, it appears, lately assembled at the Docks, Leith, to witness the departure of Mr. Goodlet on his trial trip in an experimental air-propelled vessel, which proceeded at a very slow rate to the extremity of the pier, about a mile we should think from the docks, when Mr. Goodlet deemed it prudent to return to the docks. It is said that he had discovered some defect in the air-valves or other parts of the complex apparatus by which he expects to attain a great speed.

THE ART-MANUFACTURE ASSOCIATION AT EDINBURGH.—A prize of twenty guineas is offered by this association for "the best original design modelled, of some object combining ornament with utility;" conditions to be ascertained from the secretary, at George-street, Edinburgh.

COMPOSITION TO PROTECT IRON OR PAINTED SURFACES, &c.—A preservative composition, patented by Mr. J. E. Cook, of Greenock, is described, on the authority of the *Practical Mechanic's Magazine*, as affording protection to the bottoms of iron ships, and for other purposes. A thin coat of it is said to prevent the efflorescence of salt from strong brine; to keep out damp when applied to oil-painted work, Roman cement, and brickwork; and to shield exposed stonework from the actions of varying temperatures, and the alternations and severities of the weather. It is also held to be useful as a coating over the plaster of rooms of houses where paper is laid on.

USE OF GLASS IN FARM STEADINGS.—A homestead has just been erected on the farm of Buklerhole, on the estate of Rockhall, on a plan which is new in this district at least, and deserving of the attention of proprietors and farmers. The whole buildings, in fact, suited for a farm of about 200 acres, are comprised in a shed 90 feet in length, by 72 feet in breadth. The shed is divided into four parts by three rows of iron pillars, which support the roof. Each of these parts is 18 feet in breadth and 90 feet in length: each part is covered with a ridge roof, one half of slate and the other of glass, so that ample light is given through the whole interior without any windows in the walls. The outer walls and interior supporting pillars are 11 feet in height, and in addition to this there is the height of the sloping roof. Each pillar is hollow, and the rain, falling upon the roof, descends through them, and is carried off by drains below the flooring. Once within the steading accordingly, there is light, dryness, and complete shelter from the weather for animals and implements; while, under such agreeable circumstances, a considerable portion of the operations of the farm can be carried on. Ample ventilation is secured by openings both in the walls and roof.—*Scotsman.*

GAS AT BRENTFORD.—The inhabitants of Brentford complain that the Brentford Gas Company charge them 6s. a thousand cubic feet for their gas, while they charge the Hammersmith people only 5s. A meeting was lately held, at which a deputation was appointed to wait upon the Brentford Gas Company for an explanation of this anomalous state of things, and to demand a reduction. Meantime an inspector of meters at the meeting gave *his* explanation of the arithmetical puzzle by saying that Hammersmith took three times the quantity of gas which Brentford consumed, and it was, therefore, that Brentford was surcharged by its own gas company. The gross humbug of this explanation, however, had previously been made manifest by the hint of one of the malcontents, who explained that the real reason was, the Brentford Gas Company had the fear of the Fulham Gas Company before their eyes at Hammersmith, while they felt themselves quite snug at Brentford. Incipient and grumbling threats of a new company for Brentford were hinted at, but it is to be hoped the company will act reasonably in this matter, more especially as they may depend upon it that it will promote their best interests if they do reduce the price at Brentford to the level of that of Hammersmith. In fact, were the meter inspector's tactics to be carried out by the Brentford people, they would insist, and with some reason, too, on having their gas from their own company at a positively lower rate than the more distant Hammersmith people.

IRON SLAG, ITS APPLICATION TO COMMERCIAL PURPOSES.—I trust it will be admitted that I have proved that bricks, tiles, pipes, and pottery, can be made cheaper and more durable from iron or clay slags than from any other material, having neither drying nor burning to contend with, wherein lies all the difficulty to be yet overcome by the advocates of Machinery *versus* Handmaking, by the common process. And is it not reasonable to conclude that as iron ore is plentiful in the neighbourhood of London, it will soon be manufactured where the articles produced are required, whether coal is found in the neighbourhood or not, as the estimate for bricks alone for London is 200,000,000 per annum, and it appears they are now supplied within a circuit of 100 miles? If the carriage, coals, and labour attending the drying and burning of bricks, &c. are saved by the use of slag, it will also enable the inhabitants of London to use their dust and ashes for disinfecting the greater part of their present sewage materials, or rather, preventing infection taking place, by mixing and removing the same in a dry state, before they are washed into the drains; and it may also be applied to the contents of the sewers for disinfecting, instead of lime, being much cheaper and on the spot, and I should think with far more benefit, particularly if used for agricultural purposes, as all earths are found to be the best for disinfecting noxious materials.—W. G. ELLIOTT.

TENDERS

For alteration to Springfield House, Toplow, office buildings, stable, and conservatory. Messrs. Tress and Chambers, architects. Quantities supplied:—

Down	£2,550	0	0
Brass	2,424	0	0
Harmer	2,434	0	0
Hird	2,030	0	0

For re-building Frampton Cotterell Church, Gloucestershire, for the Rev. W. C. Fox. Mr. Norton, architect:—

James May and Son, Bath	£6,102	0	0
Richard Hughes, Cannon-street Bristol	5,500	11	0
William Farmer, Mead's-place, Westminster	5,091	10	0
Thos. Brooks, Bristol (accepted)	4,289	0	0

For the completion of Nos. 4, 5, 6, 7, Grosvenor-villas, Holloway-road. Mr. William Sim, architect:—

Fish	£1,200	0	0
Cawland (accepted)	1,100	0	0
Watmaugh	1,007	16	0